Surf The Net Safely

Windows 10 Secrets

How Computers See

CHIP

MALAYSIA

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internationally trusted technology magazine

Win a Huawei MediaPad T1 7.0!

(intel®)

Skylake

Skylake Is Here

See what makes it tick, and tock at the same time

REVIEWS: 4 Intel Skylake Motherboards, MSI X99A Godlike Gaming, ASUS STRIX R9 Fury, Cooler Master MasterCase 5, Intel Compute Stick

09

A Lake in the Sky

F orty years ago, an enterprising group of engineer created the first microprocessor in the world, named the Intel 4004. It was the start of something totally new, as that chip began the race of making everything connected, and powered by silicon.

We slice and dice to check what makes the new processor tick, in the 'tock" phase of Intel's manufacturing cycle. We also managed to grab a few brand spanking new Z170 motherboards, courtesy of our friends at ASUS, MSI, GIGABYTE and ASROCK. Check out what we thought about the motherboards in Test Lab.

Apart from the latest 100 series motherboards, we also tested a couple of interesting smartphones. Xiaomi's Mi Note and Huawei P8 Lite is in our labs to see are they the smartphone for you. Plus, Cooler Master's first truly expandable and modify-friendly case is in our labs, and we see how it fares in becoming the ultimate modder's paradise. Also on the bench – we test the new AMD Fury, and compare it to the NVIDIA GTX 980TI, and see which one comes out smelling like roses.

Of course once we have gone through the rigorous testing in our labs, we sat down and see what does the Bat say, as we test out the latest game from Rocksteady Studios – Batman: Arkham Knight.

All in all, it is a feature-rich issue, and I hope you have a blast reading this copy of CHIP Malaysia. Until then, toodles.

Sharil Abdul Rahman

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TEST LAB

LITE & LEISURE

REGULARS

CHIP Downloads September 2015

We're back with our monthly dose of interesting, free and handy tools for you to enhance your PC experience. If you want to know how you can get these files, follow the instructions below:

1. Head on our website @ www.chip.com.my and right at the top, click on the 'Downloads" tab
2. After that, click on the respective month's post. You will then be prompted for a password. The password can be found on this page monthly.
3. Navigate using the tabs and pick the categories you want to download the files from. Once you find the file you want, just click on it and you're good to go!

And it's as easy as that!

PASSWORD FOR SEPTEMBER 2015 - 8BitsIs1Byte

Featured Tools

f.lux

Do you find yourself always changing your brightness, or contrast of your PC monitor when its day or night. Usuall0y to make it easier on your eyes, when using your computer in the dark. f. lux is a program which makes your computer display adapt to the time of day, making it warmer at night or bright again in the morning. You can tell f.lux where you live and it will adapt to your timezone. If you wish to retain your colours when doing colour sensitive tasks, you can disable f.lux at a click of a button for a set period of time.

TeraCopy

When the default Windows file manager just isn't cutting it anymore. TeraCopy is the solution to your slow transfer speeds or transfers that require more finesse. Optimised for faster file transfers even when transferring large quantities of files. While at the same time, it checks for errors with the files and allows you to pause and resume file transfers. TeraCopy is able to integrate with Windows replacing Windows Explorer by choosing the option on installation, or by a right-click menu.

Process Explorer

Ever pondered which program has a specific file or directory open? With the Process Explorer, you can now view information on which handles or processes are open or loaded. It also features a search function so you can quickly search for a certain process or program. With its unique capabilities, Process Explorer makes tracking down problems or leaks much quicker and detailed.

Essentials

Our list of essentials consists of programs and software such as graphic drivers, browsers, compression software and even Cloud storage software that will improve a PC user's experience. The links on our website won't provide you with the files, instead it will lead you to the developers' official website, where you can find the right file for you.

The Monthly Downloads

CDisplay Ex
Operating system: WinXP/7/8

CDisplay EX is a light, and free software used to read comic book formats such as .CBR, .CBZ, .PDF, and many more. Adjustable for Manga reading, it is chock full of features and fully configurable. CDisplay EX has been around for a long time and is one of the most popular comic book readers on the internet.

GhostMouse
Operating System: WinXP/Vista/7/8

GhostMouse helps you to record and execute repetitive actions. With a press of a button, it will record every mouse and keyboard input, other than mouse clicks. And in the future you can replay it to make your work less repetitive.

Ant Movie Catalog
Operating system: WinXP/7

Keeping track of all the movies we watch while testing is tough, but when we found this nifty little tool we were delighted. Being able to index and import movies from various online databases make this the perfect tool to start a personal movie collection.
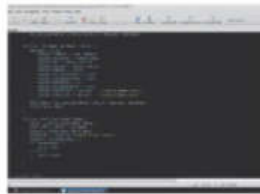
Komodo Edit
Operating system: WinXP/Vista/7/8

Komodo Edit allows you to program in variety of programming languages. C++, JavaScript, and HTML are just a few languages the Komodo Edit is capable of. Komodo Edit even has a syntax review for each different programming language.

Double Commander
Operating system: WinXP/Vista/7/8

Double Commander simplifies working with individual files and folders, capable of copying, moving, and deleting at a press of a button. Double Commander is also capable of unpacking and compressing files.
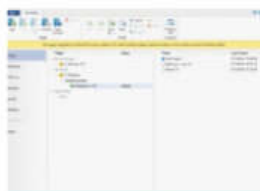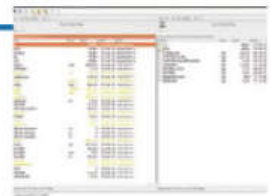
NTLite Free
Operating system: Win 7/8

NTLite is capable of a large variety of uses. Ranging from image management to driver, update, language and service pack integration. An all-in-one tool, perfect for when you need to reformat and reconfigure your computer.

Lucas Chess
Operating system: WinXP/Vista/7/8

Feeling bored with nothing to do but tired of playing Windows Chess? Lucas chess is a chess program that will help improve your game. It has training programs and will pair you up with other players online.

Jperf
Operating system: WinXP/Vista/7

JPerf is program used to monitor network performance. As opposed to numerous other tools, Jperf takes care of the speed between classic Client-Server systems. As such you are required to define your PC as server and a client.

CrystalDiskInfo
Operating system: Win XP/Vista/7/8

If you need to check the health status of your harddrive look no further. CrystalDiskInfo is a program which supports S.M.A.R.T and can monitor the health status and temperature of your HDD or SSD. Also gives you plenty of other information about your harddrive.
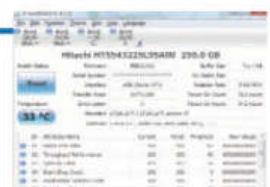
Lee Jui Siang, Vice President, Mobile, IT & Digital Imaging, Samsung Malaysia Electronics with Juliana Evans and Mr. Lee Sang Hoon, President of Samsung Malaysia Electronics (SME) Sdn Bhd showing off the new Samsung Galaxy A8 smartphone

Thin And Powerful
Samsung unveils its thinnest smartphone yet

Samsung Malaysia today launched and announced the availability of its latest smartphone device in the form of the Samsung Galaxy A8, featuring a beautifully-crafted chassis, powerful performance, excellent camera and a long-lasting battery life.

The Galaxy A8 has a 5.7 inch screen, with a display resolution of 1,920×1,080 pixels, powered by a 1.8GHz quad-core processor and 1.3GHz quad-core processor alongside 2GBs of RAM and 32GBs of storage, which can also be expanded via a MicroSD card.

"The Galaxy A8 is a beautifully crafted device; stylish on the outside and substantiated by its incredible performance on the inside."said Lee Jui Siang, Vice President, Mobile, IT & Digital Imaging. Samsung Malaysia Electronics. "It is a stunning sequel to the Galaxy A series translating into the slimmest Galaxy device yet."

The Galaxy A8 has a well-crafted chassis that utilises a sophistically-cut metal frame and the slimmest full metal body, which has

a thickness of just 5.9mm.The 5.7 inch display meanwhile has a 2.0mm bezel which allows Samsung to utilise most out of the real estate provided by this brand new design.

Not only that, the Galaxy A8 also has a high-resolution 5.0MP front-facing camera and a 16.0MP rear-facing camera with an aperture count of f1.9 and HDR functionality. These features allow users to take beautiful shots regardless of the lighting conditions, be it bright or dark. Selfie lovers will also love to know that the A8 also has Wide and Rear Camera selfie modes everyone will love.

If battery life is a concern of yours, you'll be happy to know that despite its slim size, the A8 is packed with a 3,050mAH battery that will last you for a whole day with a full charge.

In addition, the Galaxy A8 offers a range of

The Samsung Galaxy A8 is a 5.7 inch smartphone powered by a 1.8 and 1.3GHz quad-core processor, 2GBs of RAM and 32GBs of storage, which is expandable via MicroSD

benefits including theme service, fingerprint scanner and smart manager. Alongside that, there's also the Quick Launch feature as well, which allows you to quickly launch the camera app by double-clicking the home button.

The Samsung Galaxy A8 is available in Gold, White and Black options at the recommended retail price of RM1,888.
www.samsung.com/my

Kelvin Lim, Marketing Manager for HTC Malaysia (left) and Wayne Tang, Product Manager for HTC with the new E9+

A New One from HTC

The latest smartphone from the Taiwanese company combines sleek design and great performance

Designed for the dynamic individual in mind, HTC has launched the new HTC One E9+ to the local market. It combines a sleek, sophisticated design, and packed features list into a lightweight smartphone.

'Our newest HTC One E series builds on the momentum of the flagship phones with sophistication and style," said Faisal Siddiqui, President, HTC South Asia and India. 'The HTC One E9+ continues to build on HTC's innovation and design, with very good features that is sure to delight our customers."

The HTC One E9+ is packed with innovations and new technologies, including the latest MediaTek's flagship processor, the Helio X10, 64-bit-fast 2GHz octa-core processor. It also comes with a 5.5-inch 2K WQHD display that has a higher pixel resolution, bringing more vibrant colours to life.

For the audio department, HTC's Boom Sound speakers makes its appearance here, as the E9+ delivers dynamic sounds thanks to front facing speakers that are able to produce tunes and rich sounds that enrich your audio experience. In partnership with Dolby Audio, HTC aims to bring high fidelity in mobile smartphones to the next level, thus enhancing consumers' experience.

It is running the latest Android operating system with HTC Sense 7, as well as HTC BlinkFeed and HTC Zoe Highlights among other value-add features and software. For imaging, the E9+ comes with a 20-megapixel camera on the back, and an UltraPixel wide-angle front camera for those selfie moments.

As an extra bonus, the HTC E9+ comes with active Dual SIM slots, which supports 4G on both slots, making it a great partner for world travellers.

The HTC One E9+ dual sim comes in Gold Sepia and Classic Rose Gold, with a 32GB on-board storage and expandable memory up to 32GB microSD storage. The device is available at all authorised dealers and resellers for RM1,899.

www.htc.com/sea

A Tab for Productivity and Entertainment

Samsung's latest Tab S2 brings together many features in a slim design

An update to the original Tab S tablet, the Tab S2 tablet was announced by Samsung Malaysia as part of its line of premium tablets. Designed to look similar to the Note series, the new Tab S2 is the company's slimmest and lightest tablet to date.

"The Galaxy Tab S2 is not only our thinnest and lightest tablet of its size ever, it also provides users stunning Super AMOLED display which is perfectly optimised for viewing any type of digital content. We believe the Samsung Galaxy Tab S2 is the most complete personal companion device designed for consumers to carry and use in all walks of life," said Lee Jui Siang, Vice President, Mobile IT & Digital Imaging at Samsung Malaysia Electronics.

Two different designs will be available on sale – the 8 inch and 9.7 inch sizes. Both tablets feature Samsung's Exynos octacore processor, 3GB of RAM, 32GB of ROM which is expandable with microSD up to 128GB and 8 megapixel sensor for the back camera, with a f/1.9 lens.

Differentiating the two models are the screen sizes. The 8 inch screen comes with a 2048 x 1536 pixels QXGA screen, while the 9.7 inch shares the same resolution. This makes the smaller screen achieve a higher pixel density of 320 pixels per inch, to compare with the larger sibling of 263 pixels per inch.

To fulfil the needs for user's productivity and entertainment needs, Samsung has bundled related applications into the Tab S2. For the former, Samsung hooked up with Microsoft to feature their productivity apps on the tablet. This means Word, Excel, PowerPoint, OneDrive and OneNote is installed out of the box on the Tab S2. Plus, new Tab S2 owners gets 100GB of free cloud storage on OneDrive with every activation.

For entertainment, Samsung's own Milk Music streaming service and iflix movie & video streaming service apps are in the new Tab S2. Milk features curated music list, and an extensive radio station selection while iflix is Malaysia's first video content streaming services, with content coming from the US, Asia and Malaysia.

The Tab S2 is priced at RM 1,699 for the 8 inch version, and RM 1,999 for the 9.7 inch tablet variant. With each purchase of a Tab S2, users will get a year's premium service of iflix for free. Samsung's Milk Music service meanwhile will be starting from RM 9.99 per month.

www.samsung.com.my

Some of the accessories that can be purchased and used together with the Samsung Galaxy Tab S2

Julian Thean, Product Manager for Galaxy Tab S2 and Luke Au, Head of Product Marketing, Mobile Division, Samsung Malaysia Electronics with the new Galaxy Tab S2

A LINE for your Chrome

New extension makes chatting with your friend as easy as opening your browser

To make chatting with friends easier, on any platform – LINE announces a new extension for Google Chrome, which is compatible with Chrome, Windows, Mac, and Linux OSes. Unlike the existing PC versions of LINE for Windows and Mac OS X, users of the Google Chrome extension version of LINE only have to install the software once to use it on any PC with Chrome installed via their Google account.

In addition to providing LINE's core chat features, the extension offers many useful features for PC users, such as screen capture capabilities. It also provides users a fast and efficient way to send files up to one gigabyte in size. LINE for Google Chrome also introduces a new feature called Memos, which allows users to create their own notes or save and arrange text and pictures. Memos expands the number of devices available to LINE users, allowing

them to synchronize to-do lists created at home to any other PC simply by logging into their Google account. However, the Google Chrome version of LINE does not offer an auto-login feature in order to protect user security.

LINE for Google Chrome joins the parade of customized versions of LINE for smartphones and sub-devices, such as PCs (Windows and Mac), iPads, and wearable devices.
www.line.me
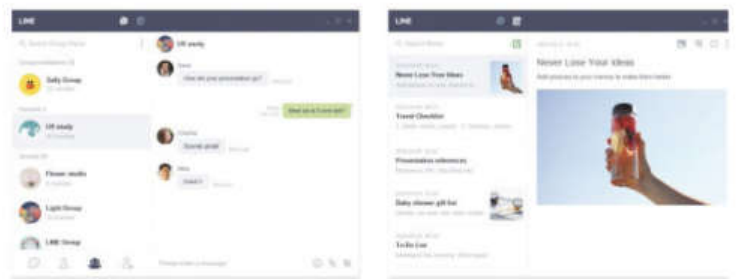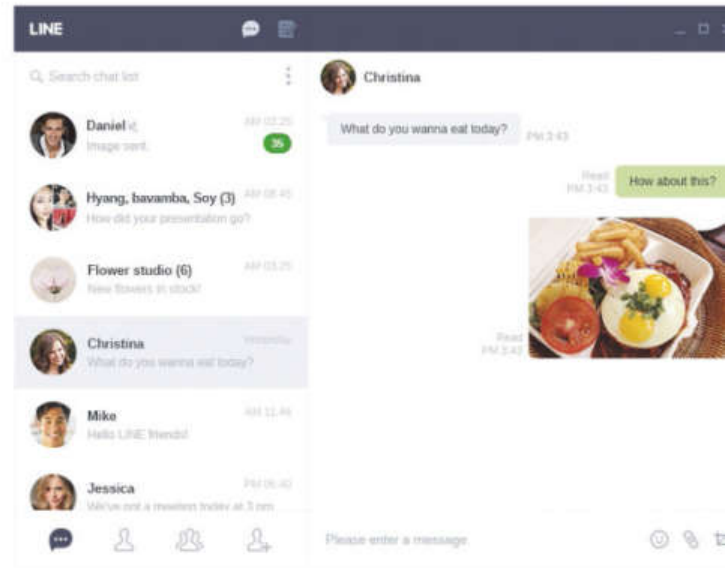
RAKU and DiGi Collaborate for negaRAKU@ HardRockCafeTour

Music lovers unite for an around–the-country tour of rock

In the spirit of Malaysia's 58th Independence Day, RAKU, Malaysia's own digital streaming service and DiGi are teaming up to rock around Malaysia with the nation's best performing acts at the nationwide negaRAKU@ HardRockCafe Tour.

Ten of the country's best rock and indie bands will be performing at four Hard Rock locations around the country during the weekends throughout August and the first week of September. Each concert will take place for over four hours on Sundays, between 3-7pm at Hard Rock Cafes starting from Melaka on

the 9th of August, followed by Penang the next Sunday, Sabah, and finally ending in Kuala Lumpur on the 6th of September.

The acts that will be performing at the concerts include Bittersweet, Massacre Conspiracy, Tres Empre, Love Me Butch, Plague of Happiness, Dragon Red, Pretty Ugly, Bill Musa, Hazama and Misgiven.

For those who are not able to attend the concerts over the four weekends, they need not worry as they can also still enjoy the performances by streaming in to the tour live on the RAKU app.

Jake Abdullah, CEO of Astro Radio said 'RAKU has ramped up its suite of features to include functions like offline listening, digital radio stations and a web player which can be embedded on websites outside of RAKU. Video content will also be available soon., which will allow users to experience live local music on the go".

Since its launch, RAKU's downloads have doubled, recently hitting 87,000 downloads on app stores. At the same time, the number of songs on RAKU grew from its initial 2 million to 8.5 million songs. With more songs and radio streaming available every day, the company is confident that time spent on RAKU will also continue to grow.
www.raku.my

Foo Mun Yee, Country Lead, Lenovo Smartphone, Malaysia, holding the Lenovo VIBE Shot, with the models.

The Lenovo VIBE Shot is a 5.0 inch smartphone powered by a Qualcomm Snapdragon 615 processor, 3GBs of RAM and 32GBs of storage

The Lenovo Vibe Shot has a 16.0MP camera alongside a three-tone flash that helps you take more natural-looking shots

Get Into The Shooting Vibe

Lenovo's new VIBE Shot smartphone is serious about camera performance

Lenovo looks set to move strongly in the local smartphone market as they unveil their latest product, the Lenovo VIBE Shot, an Android-based smartphone that's skewed towards the camera-loving generation, boasting a variety of camera options that are set to get everyone's inner shutterbug excited with glee.

The VIBE Shot features a 5.0 inch Full HD LED display, powered by a Qualcomm Snapdragon 615 64bit quad-core processor, with 3GBs of RAM and 32GBs of storage space, which is expandable via microSD storage. Its aluminum chassis ensures that the device remains lightweight and easy to carry around, which is important especially when you're going to have to whip the device out at a moment's

notice in order to capture a photo.

Purpose-built for photography, the VIBE Shot houses two powerful cameras on both the front and the back of the device, namely an 8MP wide-angle front-facing camera, which allows users to take selfies with friends and families, as well as a 16.0MP rear-facing camera, with powerful features such as built-in optical image stabilisation (OIS), infra-red auto-focusing system, as well as a tri-colour LED flash that ensures a more natural look when it comes to lighting up dark subjects.

As if to drive home Lenovo's intent for the VIBE Shot as a photography tool, it also features a dedicated physical shutter button, which also doubles as an instant way for users to access the camera app, without having to

fiddle with the screen.

The camera app is also different now, as Lenovo has designed it to cater to both newbie and enthusiast photographers alike, in the form of Auto and Pro modes. In Auto mode, the camera will use the Smart Composition function which incorporates automatic scene detection and an on-screen point and shoot guide.

The Pro mode meanwhile allows users to manually control functions such as aperture, shutter speed and ISO settings, enabling them to take photos in whatever creative manner they want. One feature which is very useful for the front-facing camera is the panoramic selfie features, which captures three different selfies in panoramic mode, turning them into one ultra wide angle selfie photo, which could include way more people as well.

Available from today onwards, the Lenovo VIBE Shot comes in three colours, Carmine Red, Graphite Grey and Pearl White. For now, only Carmine Red and Graphite Grey models are available in stores nationwide and online for RM1,399.

www.lenovo.com

Curves Are In

Acer Malaysia introduces their first curved monitor and G-Sync monitor

Curve is now in, especially for monitors. Thanks to modern manufacturing processes, curved panels now becoming more and more common, and on the road to becoming more affordable in the long run. Acer is one of the companies that is dabbling with first generation curved monitors, and has bought to the Malaysian market the ultra-wide curved monitor XR341CK after teasing it during COMPUTEX.

Designed to look futuristic, the XR341CK features a glossy panel and aluminium adjustable base to provide the most optimal and ergonomic viewing experience. It also feature a zero-frames design to give the maximum viewing area for the users – even when daisy-chaining it for a truly immersive viewing experience. Thanks to the ultra-wide QHD resolution (3440 x 1440), picture quality will be off the charts.

Also introduced alongside the ultra-wide is the company's first G-Sync enabled monitor in Malaysia, the XB270HU. Thanks to the technology from NVIDIA, game experience on the monitor will be flicker free and tear-free. At QHD, it is not a 4K display, but it is more than enough for gamers to experience ultra-high resolution gaming of their favourite games.

Lastly, the updated Revo One series also makes an appearance, featuring new Intel Core i3 and i5 processor for more performance in a small box. It still features three 2.5" drives, two of them hot-swappable. It is perfect for the living room, with resolution support up to 4K.

The XR341CK is retailing at RM 3,699 while the XB270HU will have a sticker price of RM 2,599. The new Revo One will start from RM 1,500.

www.acer.com.my

XR341CK curved monitor

XB270HU gaming monitor

Jerry Soon, Acer's Head of Consumer Desktop & Peripherals and Edmund Hoh, Acer's Product Manager of Consumer Desktop & Peripherals with the new Acer XB270HU gaming monitor and the XR341CK curved monitor

Windows 10 For One And All

Microsoft Malaysia announces local availability of Windows 10 operating system

Microsoft's latest operating system, Windows 10 was first launched worldwide not too long ago on the 29th of July, and not too long after, Microsoft Malaysia also did their own local launch here in Malaysia to show that Malaysian consumers will not be left out when it comes to being able to upgrade to or purchase Windows 10.

Windows 10 combines features and functionality from both Windows 7 and 8.1, while introducing new ones such as Windows Hello, which allows you to use your face or fingerprint to log in to the system rather than having to use a password which can easily be forgotten.

Not only that, Microsoft has also redesigned its browser from the ground up, calling it Microsoft Edge, which replaces Internet Explorer. With this new browser, you can easily choose the way you read a website as it features a reader mode, and you can even annotate, edit and share webpage content to your social networks or via email easily.

"Since the global launch of Windows 10 on 29th of July, Microsoft has seen as many as 14 million people around the world upgrade to Windows 10 within the first 24 hours, with reviews and customer feedback overwhelmingly positive around the globe." Said K. Raman, Managing Director, Microsoft Malaysia.

There are a number of methods to obtain the new Windows 10 operating system, chief of which is by way of a free upgrade from a legitimate copy of Windows 7 or Windows 8 by reserving a download slot that allows the PC to automatically download and upgrade to Windows 10. Microsoft Malaysia will also be conducting Windows 10 roadshows, starting with the SNS Roadshow at Mid Valley Megamall on 10th to 16th of August, which will then be followed by a booth at the Malaysia IT Fair, which is also at Mid Valley from 28th to 31st of August.

If you're a system builder and looking to build a Windows 10 PC from the ground up, you can also purchase the retail copies of the operating system in one of two versions:

Windows 10 Home for home users, or Windows 10 Pro for office and professional users who need the extra features such as BitLocker, virtual machines and Active Directory.

Windows 10 Home version retails for RM629.99, while Windows 10 Pro goes for RM1,099.99 at authorized resellers nationwide right now.

If you're not too familiar with how the upgrade process should go, Microsoft Malaysia has also set up a number of Tech Benches; a service where individuals canupgrade their Windows 7 and 8.1 devices at authorized retailers nationwide. Some of these retailers include All IT Hypermart Sdn Bhd, Harvey Norman, Hello Station Sdn Bhd and Thunder Match Technology Sdn Bhd. ▣

www.microsoft.com/my

K. Raman, Managing Director of Microsoft Malaysia and Bruce Howe, Head of the Consumer Channel Group, Microsoft Malaysia holding up two devices running Microsoft's latest Windows 10 operating system

Acer, Microsoft and Intel reps with the new Acer Aspire R11, as well as Windows 10 ready devices from Acer

Going 360 over 10

Aspire R11 is first device with pre-installed Windows 10 in Malaysia

Going in as a manufacturer that comes out first with something new is not easy, but Acer has done it, with their latest Aspire R11, the first device in the market with pre-installed Windows 10 out of the box. At 11.6 inch, the device is compact, and comes with a 360 degree hinge to give it four different mode of use.

'Acer is dedicated to incorporating the latest innovation in our diverse range of products to maximise technology for our customers. This is further recognized with the support we received from our customers by making us the No. 1 in Total Shipment for the first quarter of 2015 according to IDC Worldwide Quarterly PC Tracker, February 2015 report, ' Said Chan Weng Hong, Director of Sales & Products, Acer Sales & Services Sdn. Bhd.

With a fabric-textured cover, it has a visually appealing outlook, plus it gives additional benefits of it being a grippy surface, plus is also scratch resistant. The 11.6 HD 366 x 760 pixels touch screen features Zero Air Gap technology for clearer pictures, and Corning Gorilla Glass for better protection against scratches.

The unique 360 degree hinge allows the R11 to transform to four modes - notebook, pad, display and tent. Each mode designed to be perfect for different user experience. It also comes with Acer BluelightShieldBlue to protect the eye from Blue light damage.

It comes with a battery that support up to 8 hours of battery life, Intel Penting quad-core processor, 4GB of RAM, a HD front camera with up to 720p recording, 500GB of local storage and even HDMI port.

The Acer Aspire R11 is priced at RM 1,499 and is now available from major retailers. **www.acer.com.my**

A selection Acer devices that is Windows 10 ready

The new Acer Aspire R11

Virtually Seeing Your Next Home

iProperty Group first in Malaysia to use Virtual Reality for enhancing house-buying experience

Launch of iProperty Googles - (L-R) Teh Heng Chong, Chief Operating Officer, Sales & Marketing of Mah Sing Group and Georg Chmiel, Managing Director & CEO of iProperty Group

A first for Malaysia, iProperty.com introduced a new way to let potential customers see their new home – via the industry's first Virtual 3D property showroom. Called the iProperty Goggles, it provides property buyers and investors an impressive immersive experience while offering developers a new platform to showcase their latest property developments.

"We are very excited to launch this innovative product that will change the way property showrooms are showcased with nothing more than a smartphone and a specially created virtual reality goggles. It's the most interactive way for property developers to showcase their latest developments," said Georg Chmiel, iProperty Group's Managing Director and Chief Executive Officer.

The first property developments that used this new technology will be Mah Sing Group's D'Sara Sentral in Sungai Buloh and M City at Jalan Ampang, where visitors at the recent Home & Property Investment Fair get to try it on and experience the new developments virtually.

The iProperty Goggles provides a virtual reality experience through specially created goggles worn by prospective buyers. Once worn, the device equipped with a mobile phone, will display visuals replicating the showroom enabling consumers to virtually walk through the showroom.

www.iproperty.com

Bridging Malaysian Creatives to the World

VAX2015 aims to be a different kind of creative show in Malaysia

Bringing together the best of the Malaysian creative industry under one roof – that is the aim of Visual Arts Expo 2015 (VAX2015). In fulfilling the need to expose the best in locally produced visual arts onto the world stage. The event will see creatives from every branch of the industry gather to showcase their work and attract interested party to join up with them to bring their content to the next level.

"By connecting local creatives with the international players, VAX aims to create new relationships between the local creative industries with international players from Europe, Japan, and America to spark growth and spur more creative content to be generated locally for the world," says Fazri Nuha, Project Director for VAX.

VAX2015 will have an impressive invitee list to the event – which includes Shoji Kawamori (who is well known for involvements in animation projects such as Macross and Aquarion) from Studio Satelight, as well as Hiroyuki Yamaga, CEO and Co-Founder of Studio Gainax. Local Malaysian animation studios such as Les Copaque, Kureshii and Silver Ant will also be joining the event to showcase their handiwork.

www.visualartsexpo.com

Paul Tsai, Product Manager of ASUS Malaysia and Jimmy Lin, Country Manager of ASUS Malaysia showing off the ZenPad 7.0

ZenPad, Luxury In The Palm Of Your Hand

ASUS announces brand new ZenPad devices that exude both style and substance

Building on the success of its ZenFone 2 smartphone, ASUS launched the ZenPad C 7.0 and ZenPad 7.0 as new additions to their line of Zen products.

Designed to appeal to the modern crowd, the ZenPad C 7.0 and 7.0 are fully customisable, and will both come with Android 5.0 Lollipop. The ZenPad 7.0 embodies luxury with its 7-inch IPS Panel, and ASUS' Tru2Life technology. The ZenPad 7.0 is set to deliver amazingly realistic images with accurate contrast, sharpness and detail. Tru2Life makes it possible by boosting dynamic range, measuring the contrast between the lightest and darkest points of an image, providing wider contrast levels for incredible realism.

Both ZenPads also come with DTS-HD speakers, making them the first tablets to ever feature DTS-HD Premium Sound which delivers a louder audio experience, with deeper bass, immersive surround sound, and fully configurable to your listening preferences.

DTS-HD is also available on the earphones and headphones, offering a theatre-quality sound with it's 5.1-channel virtual surround sound.

The ZenPad C 7.0 is powered by an Intel Atom x3-C3230 quad-core, 64-bit processor and 1GB of memory, with an internal storage of 16GB which is expandable up to 64GB. The ZenPad 7.0 meanwhile has an Intel Atom x3-C3230RK quad-core 64-bit processor together with 2GB of memory and 16GB of internal storage which is also expandable. The ZenPad C will have a 2-megapixel rear camera and 0.3-megapixel front camera while the Zenpad 7.0 has a 8-megapixel rear camera and 2-megapixel front-facing camera.

The ZenPads' other selling point is that it can be customised with accessories, such as the Audio Cover, a cover that has 6 speakers and can be used as a convenient stand for watching videos, and is able to last up to 6 hours of continuous usage on a single charge, boasting 6 times sound volume.

The ASUS ZenPad 7.0 is a 7.0 inch tablet powered by Intel's Atom X3-C3230RK processor with 2GBs of RAM and 16GBs of storage

The ZenPad C 7.0 will be available for a retail price of RM499 in Black, White, Red, and Aurora Metallic. The ZenPad 7.0 meanwhile is available for RM749 in Black, White, and Aurora Metallic.
www.asus.com/my

Showing off the (from left to right) Toughbook CF-MX4, Toughpad FZ-X1, and Toughbook CF-54

The Toughbook CF-MX4 features a 14-inch Full HD IPS display

The ToughBook CF-54. Small and rugged, featuring the latest Intel Core i5-5300U vPro processor

Can't Get Any Tougher Than This

Panasonic introducing new additions to their rugged line of devices, with more variety of features than ever

Panasonic, known for their rugged and reliable mobile computers announced today that they will adding new devices to their line of Toughbooks and Toughpads in the form of the Toughbook CF-MX4 and CF-54, as well as the Toughpad FZ-X1 For their Toughpad line.

The Toughbook CF-MX4 is a business-rugged laptop, while the Toughbook CF-54 is a semi-rugged laptop. Both will come together with Windows 8.1 but will be upgradable to Windows 10 in the future.

The CF-MX4 houses the latest 5th-generation Intel Core i5-5300U vPro processor, along with a 12.5 inch IPS Full HD capacitive 10-finger multi-touch display, a first ever for a business-rugged Toughbook. As for memory and storage the CF-MX4 will come with 4GB of RAM and a 128GB

SSD. There are also integrated options that are offered, such as dedicated GPS, mobile broadband with satellite GPS, antenna pass-through, and insert-able and contactless Smartcard readers.

Not only that, users can also go for an optional second battery with hot-swap features, that allows users to change the battery without the need to shut down or hibernate. Encased in magnesium alloy the CF-MX4 is ready to endure the knocks and scrapes that come with being on the go, and has been tested to withstand a 76cm fall and 100-kgf of pressurized vibration. Despite all its features and incredible durability, the CF-MX4 is only 21mm thick and 1.14kg in weight, making it slim and lightweight.

Meanwhile, the Toughbook CF-54 will

also feature the i5-5300U vPro processor and a 14-inch Full HD Active Matrix (TFT) LCD. Using a honeycomb design, it has received MIL-STD 810G certification for its durability. As an added bonus it will have a spill-resistant keyboard and touchpad area. Memory wise the CF-54 will also have 4GB RAM, and a 500GB HDD. Encased in the same magnesium alloy chassis, the CF-54 offers a similar level of durability that you would enjoy with the CF-MX4.

The Toughpad FZ-X1 is the latest addition to Panasonic's Toughpad line, housing a 1.7GHz quad-core Qualcomm S4 Pro(APQ8064T) processor, with numerous unique enterprise-grade features such as an OS-based enhanced security, a 5-inch HD anti-reflective 10-point capacitive multi-touchscreen display that works even in the rain , 2GB of RAM, and 32GB of built-in storage. For its camera the FZ-X1 uses an 8-megapixel rear camera with flash and a 1.3-megapixel front-facing camera. The device will be fully sealed against dust and is submersible in up to 1.5 meters of water for up to 30 minutes.

The Toughbook CF-MX4, CF-54, and the Toughpad FZ-X1 are now available in Malaysia at the following RRP; the ToughBook CF-MX4 for $2349.00*, the ToughBook CF-54 for $1949.00*, and the ToughPad FZ-X1 for $1499.00*. All products will come with a comprehensive 3-year warranty.

business.panasonic.com/toughbook

4K Is The Future For Sony

Sony announces its latest line-up of SLT and point-and-shoot cameras

Sony Malaysia recently unveiled a series of new cameras during a weekend launch in Kuala Lumpur. These cameras are the Sony A7R MkII, the Sony RX100 Mk IV and the Sony RX10 II, all of which are improved versions of its predecessors.

The Sony A7R MkII is the hero product for this event, as it features the world's first back-illuminated full-frame EXMOR-R CMOS sensor, with 42.0MP and an ISO count of a whopping 102,400, as well as AF response that is 40 percent faster than the original A7R, thanks to its 399 point phase-detect AF system.

The camera also includes a 5-axis image stabilisation system borrowed from the acclaimed α7 II model, and has the ability to shoot and record 4K videos in multiple formats including Super 35mm and full-frame format.

The 42.4-megapixel sensor combines gapless on-chip lens design and anti-reflective coating on the surface of the sensor's glass seal to dramatically improve light collection efficiency, resulting in high-sensitivity with low-noise performance and wide dynamic range.

The Sony CyberShot RX100 MkIV and RX10 II meanwhile feature the world's first 1.0 type stacked Exmor RS™ CMOS sensor with advanced signal processing and an attached DRAM memory chip. The high speed signal processing and DRAM memory chip work together to enable more than five times the readout rate of image data, a feature that is usually only available on professional-grade cameras.

The new RX100 IV and RX10 II both have the ability to record super slow-motion videos of up to 40x slower than the standard rate, allowing users to capture and replay fleeting moments of action with incredible detail, resolution and clarity.

One thing to note of all three cameras is the fact that they can all record 4K videos. The slight difference here is that while the A7R Mk II and RX10 II can record up to 29 minutes worth of videos, the RX100 MkIV can only do so in bursts of 5 minutes.

The Sony A7R MkII is already available in markets right now at a suggested retail price of RM11,999 for body only, while the Sony Cyber-shot RX100 IV and RX10 II cameras are available in black at suggested retail price of RM3,799 and RM5,299 respectively.
www.sony.com

The Sony A7R MkII features a 42.0MP EXMOS-R CMOS sensor and is capable of shooting 4K videos

Baron Abas, Cinematographer, Fakrul Jamil, Landscape Photographer, Loo Kah Kit, Product Manager, Digital Imaging, Sony (Malaysia) Sdn. Bhd.; Satoshi Hatano, Managing Director, Sony (Malaysia) Sdn. Bhd.; Elizabeth Lee and Allan Law, Product Managers, Digital Imaging, Sony (Malaysia) Sdn. Bhd; Alexis Fam, Wedding & Lifestyle Photographer and Wilson Ng, Traveler introducing the new cameras to the masses

Huawei Contest

HUAWEI

The Huawei MediaPad T1 7.0 is inspired by the soft and elegant shape of the wings of a swan, utilising the company's own precision technology to ensure that the T1's lithe frame fits snugly into your hands - while the sandblasted, aircraft-grade aluminium back cover completes its gorgeous design.

Enjoy browsing the web, posting on social media and using entertainment and educational apps, powered by a 1.2GHz quad-core Qualcomm Snapdragon 200 processor, with 1GB of internal memory, and viewing videos on the tablet's 7.0-inch HD display.

The T1 7.0 also houses a long-lasting 4,100mAh battery which allows you to do all of the above all day long, all on a single charge. Its metal unibody design is also lightweight, making it easy to use, even for long periods of time.

CHIP Malaysia, in conjunction with Huawei Technologies (M) Sdn Bhd, is holding a contest to give one lucky reader a chance to get your hands on a unit of the Huawei MediaPad T1 tablet. All you need to do is to answer a couple of simple questions and fill in a slogan for that one opportunity to get yourself a free tablet.

Terms & Conditions:
1. Contest is open to all Malaysians except the employees of Online Dynamics (M) Sdn Bhd & Huawei Technologies (M) Sdn Bhd
2. Only original entry form is accepted.
3. The judges decision is final and no correspondence will be entertained.
4. Closing Date: **30th September 2015**
5. Send your entries to:
Online Dynamics (M) Sdn Bhd/Huawei Contest,
A-5-07, Block A, Neo Damansara,
Bandar Damansara Perdana, Jalan PJU 8/1, 47820 Petaling Jaya,
Selangor Darul Ehsan.

Questions:

1) What inspired the creation of the Huawei MediaPad T1 tablet?

_____

2) What processor is the Huawei MediaPad T1 running on?

_____

Complete the slogan below in 15 words or less:
"I need the Huawei MediaPad T1 tablet because..."

_____

_____

Name: _____

I/C No: _____

Address : _____

_____

_____

Tel/HP: _____

Email: _____

Local Curated Music for Malaysians

JOOX brings tunes selected by Malaysians for Malaysians

Joining in the fray for streaming music services in Malaysia is JOOX, under the WeChat brand. JOOX aims to differentiate themselves with other music streaming service by offering locally curated playlist, selected for the Malaysian consumer.

'With our many years of innovation in pioneering user-friendly mobile social applications, JOOX's simple and sleek interface will definitely further enrich and amplify Malaysians' music experience. The most unique feature about JOOX is its locally curated music content, that are exclusively created to cater music enthusiasts instead of a one-size-fit all service offerings", said Poshu Yeung, Vice President, International Business Group

at Tencent, the company behind JOOX free music application.

Available on both iOS and Android, JOOX features a library of local and international content from companies such as Warner Music, Universal Music and OSM Malaysia.

JOOX is now available to download for free on both iOS and Android devices with an optional RM14.90 monthly fee to access its VIP subscription. First time users who sign-up will each get free VIP service for 30 days before moving back to the standard free-tier.
www.jooxmusic.com

Dennis Hau Presenting The Most Happening Streaming App, JOOX

To Infinity and Beyond

AOC announces new monitor in conjunction with The Martian

AOC has recently partnered with Twentieth Century Fox to become the official monitor partner of "The Martian", and will be the company's first product placement in a major Hollywood film.

In line with the release of "The Martian", AOC has unveiled its latest product in the form the 24-inch AOC G2460PF gaming monitor. It is a 144hz monitor with a screen response time of 1ms, and features AMD's Free Sync technology which synchronises the GPU and monitor, removing visual tearing and stutter.

The AOC G2460PF features a 4-way adjustment stand, which allows users to adjust the monitor's height by 130mm, swivel left and right, tilt the screen angle, and even pivot the display by 90 degrees,

turning it into a vertical display. Not only that, the GP2460PF comes with a SuperSpeed USB hub, which is compatible with USB 3.0 devices and storage device, and can be used to connect gaming peripherals. The monitor also has support for display inputs such as HDMI 1.4, DisplayPort, DVI, and MHL.

AOC uses its very own Flicker-Free technology called Direct Current to protect your eyes and reduce fatigue, over the more commonly used Pulse Width Modulation. To explain how it works, Pulse Width Modulation works by rapidly turning the backlight off and on, while Direct Current dimming constantly powers the backlight to eliminate flicker.

The AOC G2460PF is expected to be

The AOC G2460PF features a 4-way adjustable stand to fit your every need

available in October 2015, within the Asia Pacific Region through AOC partners. The suggested retail price of the G2460PF is RM1,299.
www.aoc.com

Another Feather In The Hat

Red Hat opens Malaysia subsidiary

Despite being around in Malaysia since 2006, Red Hat Malaysia has always been a subsidiary of Red Hat Asia Pacific Pte Ltd. After a decade, and improved business growth from year to year, the biggest open source company in the world finally opened a proper branch here as Red Hat Malaysia Sdn Bhd.

According to Damien Wong, Red Hat Senior Director and General Manager for Red Hat ASEAN, Malaysia is an important country for the company within the region as the company sees Malaysia as a country that has a high potential for open source solutions adoption across industries.

Whilst the company's main product continues to be its Red Hat Linux operating system, Red Hat's other products include Cloud, storage, middleware and virtualisation. Thanks to this diversification, Red Hat has continued to see 53 straight quarters of growth through good and bad economic weather.

When asked why the company is only looking to open up a proper subsidiary in Malaysia, Damien said that the company views its expansion plans very seriously, and will not venture into a country without first doing research into various aspects such as business prospects and ICT infrastructure.

David Yap, Country Manager of Red Hat Malaysia and Damien Yap, Senior Director and General Manager for Red Hat ASEAN at the launch of Red Hat Malaysia

In Malaysia, Red Hat has set up an Open Source Centre of Excellence in Melaka and to also provide training material under its Red Hat Academy to help institutions of higher learning to learn about open source technology.

Located in Mid Valley Megamall, Red Hat Malaysia Sdn Bhd is spearheaded by its country manager, David Yap.
www.redhat.com

U Mobile Gives Scholarships to Local Uni Students

Initiative driven to give local students a reward for their academic excellence

To empower local students to achieve academic excellence, U Mobile is granting a "U Excellence" Academic Award scholarship to top local students from University Malaya. The "U Excellence" Academic Award is an initiative in collaboration with the Ministry of Communications and Multimedia Malaysia to reward university students for their excellent academic achievements.

U Mobile, in collaboration with the Ministry of Communications and Multimedia Malaysia, has decided to institute an annual scholarship to recognize students who have accomplished academic achievements beyond expectations.

The "U Excellence" Academic Award is the first telco-backed award in Malaysia to offer scholarship to local university students.

In time with Hari Raya Celebration, U Mobile takes the opportunity to announce the "U Excellence" Academic Award. Yang Berhormat Datuk Seri Panglima Salleh Said Keruak, Minister of Communications and Multimedia Malaysia and Yang Berhormat Dato' Seri Ahmad Shabery Cheek, Minister of Agriculture & Agro based Industry accompanied by CEO of U Mobile, Wong Heang Tuck, handed over the certificate to the ten exemplary final-year students from Malaysia's most prestigious university - University of Malaya. Each student, coming from a wide range of adacemid backgrounds which includes Economics, Education, Arts and Social Science, was granted with RM 5,000 as a recognition to their achievement.

"With this award, we are investing in the excellence of today's youth to give them a booster to continue to strive for the best in life. Our latest initiative will be an avenue for U Mobile to recognize individuals that have gone beyond expectations of conduct. This will be one of our annual award to recognize excellent scholars, as we hope to be part of their journey to success and make this country a better place for generations to come," said Wong later on.
www.u.com.my

Cooler Master Announces Availability Of Mastercase 5 & Mastercase 5 Pro

Cooler Master announced the availability of the MasterCase 5 and MasterCase 5 Pro, the world's first mid-sized modular PC towers. The cases support exterior expandability which is made possible through accessories that can be purchased separately. Making their first appearance in COMPUTEX 2015, the MasterCase offers unparalleled control over its form and function, and usher in a new era of FreeForm Modular Systems.

The MasterCase 5 sets out to revolutionise the way PCs can be built, designed, and used. Bringing this dream to fruition is the FreeForm technology that gives users absolute control over how their casing looks and functions. Not only does the FreeForm Technology give exterior layout control, it also provides interior layout flexibility.

To further prove the freedom that is given with its FreeForm Technology, Cooler Master invited eight Makers to COMPUTEX 2015. Each Makers different in what they do, but share one thing in common, which is their spirit of "making". Giving each Maker a chance to build a system that's unique to them, each of them were able to build a rig that signified who they were. From aggressive looking rigs to even a robotic bartending machine that can prepare drinks, the MasterCase 5 served as a platform which allowed each Maker to share their passion with the world.

Within the MasterCase 5, FreeForm allows a single case to be constantly upgraded with different configurations. Users will no longer need to replace their casings or systems to fit their needs. An example would be FreeForm's Clip-and-Click panel which lets users to adjust the drive cages vertically, or remove it altogether. With such flexibility the MasterCase 5 can be used to build multiple system configurations with just a single case.

At launch, the Mastercase 5 and MasterCase 5 Pro will be available for purchase from selected Cooler Master Channel Partners. The MasterCase 5 will be available at a suggested retail price of RM479 and comes with dual top handles and a standard door, while the MasterCase5 Pro will be available at a suggested retail price of RM599 and comes with a side windows panel, elevated mesh top cover, and additional interior expandability options.

Users who wish to upgrade from the MasterCase5 to the MasterCase 5 Pro will be able to do so through purchasable accessories from authorised retailers and online CoolerMaster stores.

Chrome Blocks Flash Contents On The Web

For many years, Apple hasn't been supporting Flash contents on its mobile devices, and Google is now following suit with its Chrome browser. However, the whole thing is supposed to happen in an intelligent way. Irritating Flash contents such as advertising videos are to be blocked, but no website contents based on Flash. For example, several browser games and videos use the Adobe technology. Blocked elements can be unblocked manually in the latest Beta version. Above all, the new function is supposed to conserve battery power.

Thunderbolt Will Run Via USB-C

In the future, Intel's improved Thunderbolt 3 standard interface will use connectors that fit into the USB-C port. Intel is basically bidding adieu to the Mini-DisplayPort, which is primarily found in Apple devices. Furthermore, Thunderbolt 3 is also supposed to double the transfer speed to 40 GBit per second – i.e. 5 GByte per second. External devices can also be charged with up to 100 watts. Up to six devices can be connected in series, and the data rate is enough for two 4K displays to be operated simultaneously.

Skype For Web: Browser-Based Calls

With 'Skype for Web', Microsoft has made it possible to use browsers to make telephone calls. You no longer have to download the Messenger as a programme or install it as an app. The website web.skype.com allows you to log into your account or create a new one. However, you will have to install a browser plug-in for telephone calls, especially video calls. Chats function in the same way. Skype for Web is currently undergoing a worldwide Beta-test, and does not facilitate emergency calls.

Sandisk With Ultra-Fast USB-3.1 Ssd

As large as a passport, but with a lot more material: In the run-up to the Computex trade fair in Taiwan, SanDisk unveiled an SSD hard drive that stores about 2 TBytes of data and transfers it at the speed of 850 MBytes per second. The Extreme 900 drive is connected via USB 3.1 – Consequently, Mac-users will also be able to use the SSD without having to rely on adapters. A cable with a reversible type-C connector is enclosed. The Extreme 900 costs about 100 dollars, but there are variants that are cheaper: The 480-GByte and 960-GByte versions cost about 400 and 600 dollars, respectively.

Apple Music is giving Spotify the shivers

It's now official: Apple Music has gotten into the music streaming market at a somewhat later stage, and it now wants to teach Spotify – the industry leader – the meaning of fear. In the future, Apple Music will be seamlessly integrated into the music player found in the iPhone and the iPad – This means that streamed songs will be played in the same manner as those that have been downloaded from iTunes. This can be done when the device is offline, and the functionality is also compatible with Android. A suitable app for Google's operating system is expected to be available from autumn onwards. In order to provide better recommendations, peers will curate the music of this world. Furthermore, Beats 1 is a radio station that transmits on a 24/7 basis, and for which the BBC moderator Zane Lowe was poached. At 9.99 euros per month, Apple Music is exactly as expensive as Spotify, and the service can be used for free for the first three months. According to its figures, the Swedish top dog currently has about 20 million paying customers, and a total of 75 million users. Spotify is actually going a step further: In the future, the service will also stream music videos. The Swedish start-up recently obtained about 500 million dollars from investors, in order to be able to grapple with the giant from Cupertino.

Research: Wireless Charging Via WLAN

American researchers have, for the first time, been able to charge batteries via WLAN. The researchers – who work for the Washington University – call the system 'Power over Wi-Fi' (Po-Wi-Fi). The energy can be transferred with the help of minimally-adapted routers. Whenever the number of dispatched packets undercuts a certain value, a signal is connected for the power supply. In the initial tests, the researchers were able to supply electricity to a camera sensor over a distance of several metres, and trigger the camera every 35 minutes.

Facebook Drops Its Plans For A Satellite-Web

According to insiders, Facebook is dropping its plans for a satellite-based internet. At the beginning of 2014, the social network announced a global network comprising drones, satellites and lasers at the Mobile World Congress. The network was supposed to provide comprehensive coverage in economically underdeveloped regions such as Africa. Google had announced similar plans at the time, but the company abandoned them last autumn, choosing instead to invest in SpaceX. The space company is working hard on similar plans.

Duqu 2011 — Duqu 2015
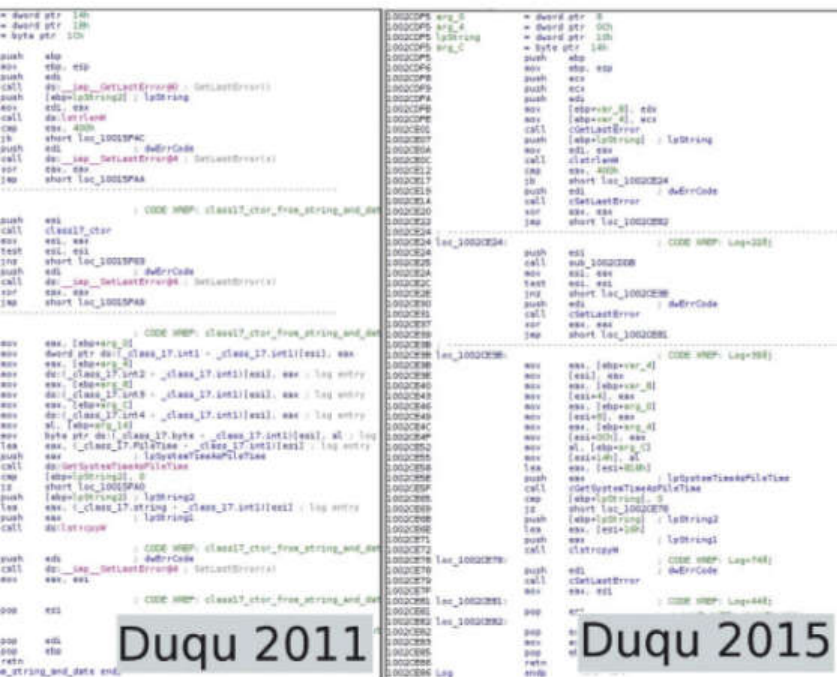
Suspected state-sponsored hackers use highly complex malware to attack the anti-virus protectors

Kaspersky Suffers Attack From Hackers

The computer security company falls victim to a large-scale cyber attack

Kaspersky, maker of anti-virus software, has recently been attacked by cyber-criminals. The people behind the attack are the creators of the Duqu malware, which affected industrial facilities throughout the world in 2011. Dubbed Duqu 2.0, the new virus is a highly complex malware – and Kaspersky is simply one of its targets.

Besides the security company, the nuclear negotiations taking place between the permanent members of the UN Security Council and Iran were also hacked, along with the commemoration of the 70th anniversary of the liberation of the Auschwitz concentration camp. The attacks have been taking place since January, but Kaspersky is still dealing with the ramifications. According to the findings of the virus protection company, Duqu 2.0 did not cause any damage, but simply collected information.

However, it has allegedly failed to obtain any details regarding Kaspersky's anti-virus applications, as had they obtained such an information, it would have made all of Kaspersky's products useless. The virus was able to get this far on account of three unpatched security loopholes in Kaspersky's systems. An installation file slipped through these so-called zero-day loopholes, which then used remote access operations to download software off the internet.

According to Kaspersky, the software was so subtle that it left no traces behind on the hard drives. Given the fact that Duqu 2.0 is so technologically complex and advanced, Kaspersky is of the opinion that the entities behind it are state-sponsored hackers or intelligence agencies.

❌ Data Theft Of The Month

ICLOUD BREACH: SUSPECTED HACKERS IN CHICAGO

The hackers behind the iCloud fiasco that saw many personal photos of Hollywood's celebrities spread across the internet has finally been traced down, and are suspected to be residing in Chicago. This is the conclusion that the FBI came to after analysing IP addresses and finding out that the computers of the two Chicago-dwellers that were allegedly used to hack into the iCloud accounts of said celebrities. The FBI confiscated several PCs during the raids that were conducted last October.

SECURITY LOOPHOLE IN THE IOS MAIL APP

The iOS Mail app contains a security loophole that has not yet been fixed. Hackers can use a mail to recreate a pop-up window, which is the spitting image of the iCloud log-in window, and can tempt users to carelessly disclose their account data. This has been reported by the security expert Jan Soucek, who claims to have reported the error to Apple back in February – but to no avail.

SAMSUNG: UNENCRYPTED UPDATES HIDE RISKS

IT experts have found a way to manipulate updates for the keyboard app on Samsung smartphones. Although Samsung has patched the error, the update is being rolled out quite slowly. Since the keyboard app is a low-level app, the ability to control it allows hackers to access passwords and system files. However, the hack can only be carried out in insecure WLANs.

Shifting Security Threats: Is Your Database Safe?

By Praveen Thakur, Oracle Vice President, Technology Business Unit, ASEAN

Technology can be thought of as a double-edged sword – when harnessed well, it brings with it the capabilities to transform businesses and the way they are run, aiding them into becoming powerful industry players. However, along with it are various security risks that were previously less critical, yet increasing now as access to data expands in today's market.

Rising security threats, expanding compliance requirements, consolidation, and cloud computing are just a few of the reasons why data security has become critical. Take for example bring-your-own-device initiatives, which have led to the prevalence of smartphones, tablets and other mobile devices in the workplace, modifying the traditional office environment and creating new security risks. It is also increasingly common for organisations to engage in continuous organisational changes such as outsourcing, offshoring, corporate mergers and many more, all of which further expose the firm to new avenues of attacks.

Acknowledging the potentially devastating impacts of such attacks, these risks highlight why centralised and efficient protection of sensitive data is more important now than ever. The market agrees, with organisations rushing to adopt security initiatives. In view of increasingly sophisticated attacks and the ease at which data leakages can occur today, there is a need to shift from existing security measures in pursuit of a cohesive, in depth, and multi-layered approach. Only by encompassing preventive, detective, and administrative controls into an integrated security solution will organisations be able to consistently protect sensitive data at the source, and guard against potential attacks.

There are two key sources of data exposure, namely storage or through applications. In order to rectify this, effective measures have to be made in key foundational areas. This can take the form of preventive controls such as data encryption and the redaction of sensitive data.

Data Encryption

Malicious attacks often occur by bypassing the database and reading data at the operating system level. This is a cause for concern as many essential day-to-day database operational activities can potentially leak data when not properly performed, thus making it easy for attackers. Data encryption thus comes into play by protecting against bypass attacks, denying unauthenticated users access to sensitive information. By preventing attackers from circumventing the database, security systems are better protected against malicious attacks.

Redaction of Sensitive Data

Reliance on applications can also lead to increased likelihood of data exposure, thus compromising on the safety of security networks. This problem is further exacerbated by the embrace of smartphone and tablet devices, which makes the issue of sensitive data exposure even more urgent as data access beyond the traditional office environment becomes commonplace. Take for example, a call center application with a screen that exposes customer credit card information and personally identifiable information to call center operators. Today, exposure of that information, even to valid application users, may violate privacy regulations and put the data at unnecessary risk.

Managing such exposure is thus critical, and one cost-effective way of doing so is through data redaction. Redaction transforms displayed data while leaving stored data unaltered, thus preventing unauthorised users from viewing it. As such, it successfully reduces data exposure and prevents the exploitation of application flaws that may lead to data leaks.

As data volumes expand and the threat of exposure continues to rise, enterprises must have strong controls in place to protect data regardless of what devices or applications are used.

The time has come for security standards to recognise the importance of pursuing innovative breakthroughs in the areas of data encryption and redaction, and Oracle has sought to address this with the development of its latest Database 12c. These two essential preventive controls covering the encryption of data-at-rest, as well as the redaction of sensitive data displayed by applications, play complementary roles in forming the foundation of a multi-layered, in-depth defense approach. Together, they provide enterprises with an advanced database security solution that will equip them with the ability to ward off potential malicious attacks.ss

Danger Barometer

Kaspersky was recently hacked by a malicious group of people utilising the Duqu 2.0 malware, which has also hit the negotiating party of IRan's nuclear deal

High risk

Medium risk

Low risk
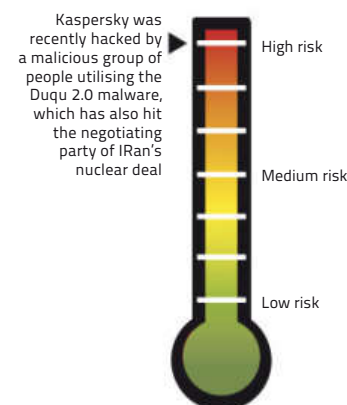
This is how much Google pays hackers

Those who find security loopholes in Nexus phones and report them to Google are rewarded – depending on their efforts.

MAXIMUM REWARD IN $

30.000	
25.000	
20.000	
15.000	
10.000	
5.000	
0	SEVERITY

low   medium   high   critical   very critical

SOURCE: MCAFEE

Going Public — IPO

RM

Congratulations on your announcement for your Initial Public Offering (IPO) listing. Now, lets take a look on what really goes into getting an IPO listed up, and what steps you need to take to make your IPO offering a successful one By Edwin Lee Yong Cieh

A practicising lawyer specialising in telecommunications, media & technology law, Edwin is in a constant effort to educate users on the many legal happenings in the IT world

There are many ways to raise money to fund a business. Many people would usually start off by using their own money or borrowing from friends, family or banks. When the business grows, they may probably get funding from angel investors, venture capitalists or government grants. For some companies, when their business has grown to a certain stage/size, it might be time for them to go to the public to raise more money.

What is an IPO?

A company that issues its shares to the public for the first time is known as an initial public offering ('IPO). IPO occurs when a private limited company switch to a public listed company.

There are essentially 2 main categories of companies: private and public. A private limited company has fewer shareholders (minimum 2 individual shareholders, maximum 50) and its owners do not have to disclose that much information about the company. Forming a private limited company is relatively easy and straight-forward. Most small businesses start off as a private limited company. No one can buy the shares in a private limited company without the owners' consent. On the other hand, a public listed company has thousands of shareholders and it is subject to strict rules and regulations, including an obligation to report its financial information to the regulator every quarter. Anyone can buy and sell the shares in a public listed company on the stock exchange in Malaysia.

When is the best time to list your company?

In determining when your company should go public, there are 2 benchmarks in which your company will be assessed. Your company will need to meet these 2 benchmarks in order for you to ascertain whether your company is ready for a listing and whether it will be able to garner investors' confidence to buy the shares in your company.

(i) Regulatory benchmark
Your company will need to comply with the listing rules and regulations such as the Capital Markets and Services Act 2007, Securities Commission Malaysia's Equity Guidelines and Bursa Malaysia's Listing Requirements.

There are essentially 2 markets on the stock exchange in Malaysia, namely:

(a Main Market: This is for established companies with a profit track record of 3-5 full financial years or companies with a sizeable business; and

(b) ACE Market: This is an alternative sponsor-driven market designed

for companies with excellent growth potential. There is no need to show profit track record. Companies listed on the ACE Market may subsequently apply for a transfer to the Main Market provided they meet the profit track record requirement for the Main Market. Many technology companies and startups prefer to list on the ACE Market due to its less stringent requirements. Recently, Bursa Malaysia announced that loss-making or companies with low profitability could still be approved to list if they were an innovative company in IT or research and development, provided they have taken steps to improve their financial performance or have strategies to revive their business.

Generally, a company should have the following attributes to meet the regulatory benchmark:

▪ there is an identifiable core business that serves as the principal source of revenue or after-tax profits;

▪ the company's core business and its industry are expected to have a visible growth trajectory within the foreseeable future;

▪ the company has a team of capable directors who are aware of their fiduciary duties and management personnel who are able to manage the day-to-day operations of the company professionally;

▪ there is no conflict of interest situation;

▪ there is a strong business prospects that is well-positioned to generate profits;

▪ the company's financial position is in a healthy condition;

▪ the company demonstrates strong corporate governance policies and practices;

▪ there is a commitment to ensure continuous compliance with the relevant rules and regulations; and/or

▪ there are internal control and risk management systems in place.

(ii) Market benchmark

There is no prescribed set of rules for market benchmark as it is purely driven by market expectations, which are the perceived value of your company based on the attributes of your company, which include:

▪ your company's financial performance when compared to your competitors in the same or similar business or industry;

▪ the track record of promoters; directors and management personnel of your company;

▪ your company's stage of development vis-à-vis industry's business cycle; and/or

▪ your company's position in the industry vis-à-vis your competitors (market share).

Why go public?

These are some of the reasons why your company should go public and list itself on a stock exchange:

▪ raise additional capital to meet your company's expansion plans and goals;

▪ enable your current shareholders to realise their investment;

▪ reward your loyal and committed employees and attract top talent via an employee share option scheme;

▪ enhance the credibility and prestige of your company as a public listed company due to the increased scrutiny and continuous reporting obligations;

▪ broaden the shareholder base and attract reputable institutional investors who may facilitate wider business networks and opportunities; and/or

▪ get better rates when you issue debt.

However, there are also factors which you should consider before deciding whether your company should go public:

▪ IPO is a long and challenging process. You and your management team must be prepared to put in significant time, efforts and resources into making it happen as the preparatory work will take up to 1 year or more;

▪ you and your management team will need to make timely, relevant and accurate disclosure about your company's financial results and significant corporate development;

▪ IPO is not cheap. There are fees payable to the Securities Commission, Bursa Malaysia and professional advisers and parties such as principal adviser, sponsor (for listing on the ACE Market), lawyers, reporting accountants, underwriters, book-runner, public relations firm, issuing house, valuers, independent market researches and tax advisers, etc.

▪ you must be prepared to be transparent and take on greater accountability. Your company's affairs and financial performance must be disclosed to the public and your company must conform to high standards of corporate governance;

▪ control by the existing shareholders will be diluted. Once your company is listed, at least 25% of the shares must be in public hands; and/or

▪ you will need to have a strong investor relations programme to engage in continuous communication with your investors as your listed company's performance will also be affected by the perceived outlook on your company.

How to launch an IPO?

These are the 11 steps involved in listing your company:

Step 1: Appoint a principal adviser and other professionals such as lawyers, accountants, etc.

Step 2: Enhance your corporate structure, composition of your Board of Directors, corporate governance and internal controls framework.

Step 3: Appoint at least 2 independent directors or one-third of the members of your Board of Directors, whichever is higher.

Step 4: Decide on a suitable equity structure and value of your company.

Step 5: Prepare listing application and Prospectus. Information must be true, accurate and not misleading.

Step 6: Submit listing application and Prospectus and attend to questions and enquiries from the Securities Commission and Bursa Malaysia.

Step 7: You will be issued a letter of approval and an approval-in-principle for the registration of the Prospectus.

Step 8: Register your Prospectus, print and distribute to the public. Sign an underwriting agreement with your underwriter whereby the underwriter will guarantee a certain price for a certain number of shares to the soon-to-be listed company for a fee. With an underwriting agreement, you will be assured of raising at least a pre-determined minimum amount from the IPO exercise.

Step 9: Offer period begins by launching road shows, briefings and presentations to investors by your company's directors and promoters.

Step 10: Once the offer period ends, balloting of the share applications will commence. Your company's shares will be allotted to successful applicants.

Step 11: Congratulations! Your company's IPO will be marked by a listing ceremony at Bursa Malaysia and trading of your company's shares will commence on that day.

The view expressed in this article is intended to provide a general guide to the subject matter and does not constitute professional legal advice. You are advised to seek proper legal advice for your specific situation.

iOS 9

Apple Goes On The Business Offensive

Apple is relying on growth in the business sector by making iOS9 devices fit for live systems, which was previously Microsoft's domain   *By Niels Head*

Apple unveiled the new version of its iOS mobile operating system at its WWDC developer conference. If you take a bird's eye view of the many minor improvements, you will realise that the ninth version of iOS is moving away from being a snazzy operating system geared towards the mobile domain, and turning into a flexible all-rounder that is compatible with PC functions. With this, Apple is wandering into Microsoft's territory. And not without good reason, either: Apple has recently begun to focus ntensively on business clients – And they want flexibility.

Apple's iPad was initially a genuine success story, but the sales figures are sinking: Compared to the previous year, they sank by 18 percent in the first quarter of the fiscal year of 2015. Thanks to cheaper competing devices, the company's global market share shrank from a third to a quarter of the pie last year. There is also a luxury-related problem: Customer satisfaction. Many users are still using the first iPad, since it fulfils their simple requirements. In order to grow within the tablet market, Apple is now turning its attention to business customers. Last year's initiation of an app-partnership with IBM was an important first step, and the improved operating system is now being placed on the table. The update is scheduled to be completed in the autumn season with a large iPad Pro. There have been whispers of a 12.9-inch iPad for quite a long time, but signs that clearly point to a large iPad have now surfaced in the code of iOS 9. The new device is to feature a keyboard with a fifth key bank, which cannot be displayed on current iPads. Furthermore, the operating system supports a higher resolution, which would make it possible to simultaneously run two iPad apps associated with the current 9.7-inch devices, which is a new feature of iOS 9.

iOS 9 Can Turn the iPad Into A PC Replacement

The split view mode displays two apps next to each other. Both apps can be operated simultaneously, so that it will, for example, be possible to compare two documents. The 'slide over' function makes it possible to temporarily drag an app – such as the Messenger app – over the app that is currently open, without losing an overview of the work that was being done. Both functions can be found in devices ranging from the latest iPad Air 2 onwards. Improved multi-tasking for the video player was already available from the iPad Air onwards: A video can now be pulled out of the browser window or an app, and the app can be used to place it at the location of your choice, in the desired size.

With iOS 9, Apple has made the iPad's keyboard more attractive for text workers: The word recommendation bar will eventually feature buttons for copying, inserting and formatting text. Those who connect a Bluetooth keyboard to the iPad can also use key combinations. Apple has created a substitute for the mouse in a simple, yet effective manner: Placing two fingers on the keyboard turns it into a laptop-like touchpad – This makes it very easy to move the cursor and mark text.

The new sketching function in the improved note-taking app is also quite exciting: It can be seen as a clear reference to the iPad Pro, for which Apple is going to offer a stylus, if rumours can be believed. The integrated mail client has also been revised. It now offers a mark-up feature, which can be used to add attachments, notes or diagrams. This function can, for example, be used to sign a PDF.

With version 9, Apple is trimming its iOS operating system for productivity. The iPad, in particular, benefits from the split view multitasking function, the improved keypad, the touchpad and the stylus-support. Together with a significantly larger iPad Pro, iOS 9 could turn out to be a decisive factor in business customers' purchase decisions. In any event, what's beyond all doubt is that as far as the mobile business environment is concerned, Apple's new innovations are going to compete quite fiercely with Windows 10.

Apple's Passbook app gives rise to the 'Wallet'. The app facilitates the use of digitalised credit, bonus and loyalty cards
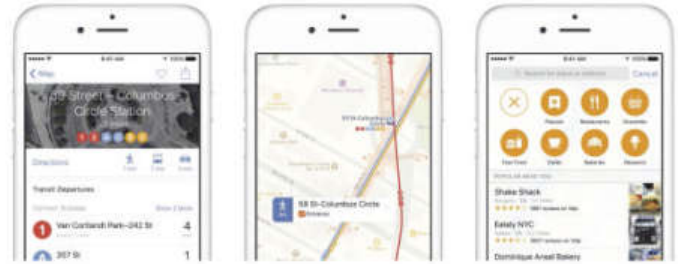
In the future, Apple Maps will be able to display routes along with means of public transport and details related to interesting points

Siri accesses app data, and it is supposed to understand complex queries made in natural languages or proactively launch apps
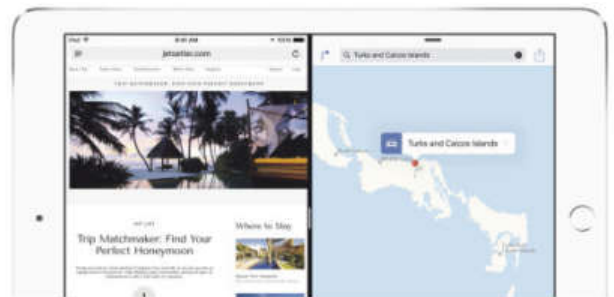
Devices from the high-performance iPad Air 2 onwards will be able to simultaneously display two active apps

In the autumn of 2015, iOS 9 will be available free of charge on devices ranging from the iPhone 4S and the iPad 2 onwards. Not all the features can be accessed using older devices

Measured Boot

Windows 10 will eventually require a TPM 2.0, as the crypto-chip is necessary for a measured boot. All the modules that are loaded when Windows is launched will be checked by a server.

TPM chips are small crypto-modules, which have been built in for several years. Windows 10 now makes them

Windows boot-up with UEFI check

The on-board tools aren't enough for a secure boot-up process. Microsoft falls back on two helpers: UEFI Secure Boot and TPM chips

October 2012
Windows 8 supports Secure Boot and Measured Boot (must be disengageable)

July 2015
New devices with Windows 10 must contain a TPM 1.2 or 2.0. Secure Boot can be switched off (optional).

July 2016
New Windows 10 PCs needs TPM 2.0

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |

July 2012
UEFI 2.3.1 features Secure Boot

October 2013
Launch of Windows 8.1

Autumn 2015
New devices with Windows 10 Mobile must have a TPM in version 2.0

Phase 1: Secure Boot

Just like its predecessors, Windows 10 uses the UEFI function of Secure Boot. The firmware only loads signed bootloaders. Each additional start-up component requires a valid signature.

Phase 2: Trusted Boot

The next start-up phase is 'Trusted Boot', which is a special protection function for Windows. Only a validly signed OS is loaded. For 'Measured Boot', hash values are calculated for the modules to be loaded. Encrypted versions of these hash values end up in the TPN registers. Toward that end, the TPM chip provides the Configuration Register (0 to 7) platform.

1) EARLY LAUNCH ANTIMALWARE

Phase 3: Measured Boot

Measured Boot gets the hash values cross-checked by an external entity. A remote attestation client **1** obtains the encrypted log file from the TPM and sends it to a checking server **2**. It adjusts the data **3** and issues a warning when something goes wrong.

Windows 10 with TPM 2.0

Turn on PC
UEFI
OS Loader
Kernel
System driver
Anti-virus protection – ELAM1)
Windows is running
Test software (Remote Attestation Client)

Hash value 1 calculation
Hash value 2 calculation
Hash value 3 calculation
Hash value 4 calculation
Hash value 5 calculation
Hash value 6 calculation

saves

TPM-Register

Saved log file (encrypted)

Server

1 reads
2 sends log file
3 adjusts data

Boot-up Security for Windows 10

Soon, the Microsoft operating system will only be able to boot up with a crypto-chip, which checks whether the computer is infected with malware   By Jörg Geiger

Windows 10 is more than just a free update that brings back the sorely-missed start menu. The new version is also quite futuristic with regard to things like the system start procedure. In this particular area, Microsoft is strengthening the anti-malware protection by mandating the use of a crypto-chip.

Now, Windows 10 can be installed on random pieces of hardware. However, the following applies to new devices: Each computer that is running Windows 10 must contain a version-2.0 trusted platform module (TPM) within a year. This crypto-chip is necessary for the measured boot procedure.

Microsoft has thus enhanced the hardware requirements for certified Windows devices. When combined with the prescribed 'secure boot' procedure, the system will, right at the boot-up phase, be more secure than every previous version of Windows. However, on the flipside, a function for deactivating secure boot is no longer mandatory, but optional. If the secure boot-up facility is active, it can lead to problems with other operating systems that have been installed in parallel, or with the process of using USB sticks or DVDs to boot up the computer.

The fundamental concern associated with measured boot is clear - the process of booting up the device should become more secure. In the case of Windows 10, this applies primarily to the process of booting up smartphones, tablets and computers. Now, tools and functions like virus scanners and firewalls watch over the system when it is in operation, but the boot-up phase is relatively unregulated. If a hacker manages to use a rootkit to subvert the booting routine of Windows, he would gain complete control over the system. In such a scenario, he would be able to hide his software from virus scanners and other protective systems.

Windows 8 had already raised the security level. One milestone was UEFI version 2.3.1 with secure boot. The advantage is that the UEFI firmware cannot be modified by software, and only allows signed bootloaders to be loaded. In the beginning, this represented a problem for Linux, but signed bootloaders are now available for the Linux kernel. With the secure boot procedure, all the components are checked for a valid signature during the boot-up phase. Unsigned – i.e. manipulated – modules are thus blocked before Windows boots up.

Booting up Windows with a crypto-chip

No TPM is needed for a secure boot process. If desired, the crypto-chip also secures the boot-up process of Windows 10. Microsoft calls this the 'measured boot' process. This new booting routine really does live up to its name, as it takes a multitude of measurements. After the computer has been started, a hash value associated with the UEFI firmware is calculated, and saved in one of the TPM's 24 platform configuration

registers. This involves protected memory areas that cannot be manipulated, and which can only be re-written when the system is booted up again. According to the specifications, the registers are divided up as follows: Registers 0 through 7 are available for measurements associated with the UEFI firmware, while registers 8 through 15 can be used by Windows itself, e.g. for BitLocker. The remaining registers are available for software produced by other providers, such as virus scanners. The secure boot process is active at the same time, and checks the signatures of the boot components. Before any module is loaded, the measured boot procedure calculates a hash value and stores the result in one of the aforementioned TPM registers.

The graphics on the page to the left list the individual steps in detail. After the test associated with the UEFI firmware has been performed, check sums are calculated by the system loader, the kernel modules and the system drivers. These check sums are then saved in the TPM. ELAM (Early Launch AntiMalware) represents a special case - Windows uses this function to allow a virus scanner to jump the gun. Thanks to the ELAM system, a protective programme produced by a third-party provider like Kaspersky, Avira or Symantec can start before the operating system has been loaded. Another hash value is created for such a scenario. The procedure ends as soon as the Windows system boots up and the user can log in. The measured boot procedure then provides an encrypted log file containing a list of all the components that were loaded during the boot-up process.

An external check provides rootkit warnings

The highlight of the measured boot procedures is that the log file can be checked afterwards. A function called the 'remote attestation client' reads it, and uses the network or the internet to forward it to a test server. The test server runs an analysis to determine whether the loaded components are secure. If they are, you can go ahead and use the computer. If, on the other hand, a module has been manipulated, it is tagged as an infected module, whereupon it should be taken offline.

The advantage of the measured boot process is that an external entity checks whether the activated components are secure. The secure boot procedure does not offer this option, since it runs exclusively on the local PC. However, we are not aware of a corresponding service provider that can be used by private users. Nevertheless, the measured boot procedure is quite important for companies whose employees use their own notebooks and smartphones. Under such circumstances, it must be ensured that the private devices are not infected with malicious software. However, the companies currently have to set up the corresponding test server on their own. ◼

Surf Securely
On Insecure Networks

The worse place to surf online is on public domain WIFI networks. We share steps on how to remain anonymous online By Fabian von Keudell und Jörg Geiger

You are always under observation when you're surfing the internet. Many entities – such as curious companies, the authorities or intelligence agencies – can find out which sites you're visiting and who you're communicating with. The technology itself is to blame - after all, when the internet was being developed, considerations related to data protection was not exactly a high priority.

Everyone knows that if you don't have an IP address, you can neither communicate over the internet nor access a web address. However, this simple address provides quite a lot of information about you, even if nobody makes the corresponding enquiries with your provider. For example, a simple test can be run to find out where you are currently residing. Several online shops use this information in order to, among other things, assess your creditworthiness. The situation becomes even more precarious when you leave your home network and access the internet through a public hotspot. Under such circumstances, other users can snoop on your data traffic, and launch targeted attacks to try to obtain your password and other data.

In this article, we're introducing you to various techniques that you can use to surf the internet securely when you're on the move or at home. For example, a VPN (virtual private network) service such as F-Secure Freedome can offer decent privacy protection.

But a VPN service represents just one of the many ways in which you can protect your privacy. Onion-routing is a way of enhancing the level of surfing security. The following section tells you how to use the individual techniques.

VPN service – F-Secure Freedome

F-Secure's Freedome is a VPN service that allows you to protect your devices with a simple tap or click of the mouse. There are 17 different server locations to choose from. CHIP's showing you how to set up the service under iOS, Android, Windows and Mac. Freedome allows all users to test the apps and the desktop software for a period of two weeks.

Setup under Apple iOS

Install the F-Secure Freedome VPN programme from the Apple App Store. When the application is launched for the first time, it asks for permission to install a certificate. This gives the application the right to modify the smartphone's network settings, and is necessary for establishing a VPN connection. Don't be alarmed by the message that says that the certificate is not signed. The certificate merely simplifies the installation process, so that you will not have to manually enter the type of encryption and the cipher code.

To activate the VPN, launch the app and tap the large white circle. The iPhone will then display the 'VPN" symbol in the upper status field. If you so desire, F-Secure will check the data traffic and block tracking attempts. This complicates attempts to create a surfing profile, which companies can use to generate targeted advertising messages. At the same time, the VPN tool also provides better protection against hack attacks. When the 'Browser protection" function is activated, the programme runs a real-time check to determine whether the currently-accessed address is on a blacklist of suspicious sites, and blocks access if necessary.

You can now specify which location you would like to use to surf the internet. F-Secure Freedome lets you choose between 17 different locations. If you would primarily like to use Malaysian internet services, you don't need to change the default settings. If remaining anonymous is your top priority, you should use the server associated with the 'Special Administrative Region of Hong Kong".

PHOTO: ISTOCKPHOTO/ DANGUBIC

Important tips for VPN usage

These measures will enable you to protect your data from prying eyes and access your services and server without having to deal with annoying error messages.

● In addition to establishing a secure data connection, you should also ensure that nobody can directly access your display.

● When it comes to online banking, you should never enter the PIN into the device that receives the mobile TAC.

● For security-related reasons, certain web services only work if you always use the same VPN access point.

● Deactivate the VPN service if you want to use the home network to access other PCs, NAS devices or printers – Otherwise, these devices will not be accessible. F-Secure has exception rules for this.

● In case of poor mobile reception, the VPN may automatically deactivate itself – So be mindful of the connection symbol !

This is how a VPN connection works

In the first step, the client sets up an **1** encrypted connection with the VPN server and transmits a web request. The server then fetches the unencrypted data from the web **2** (via its IP address) and sends it **3** back to the client in an encrypted form.
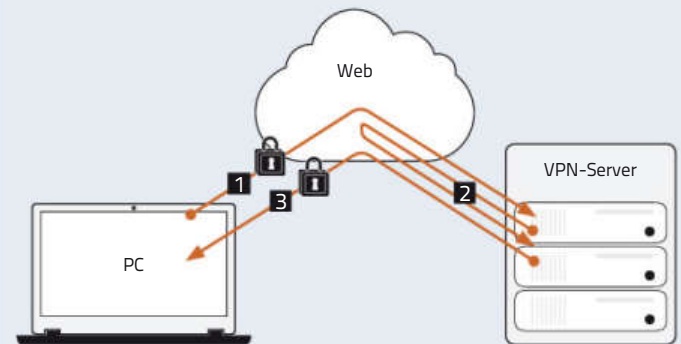
Well-known VPN services

Which VPN provider is reliable? Who can I trust? The following four companies are headquartered in Europe, and are therefore not obliged to cooperate with the NSA.

F-Secure Freedome
The service recommended by CHIP maintains access points in 17 countries, and normally costs about 30 euros (~RM126) per annum.

Hide My Ass
The world's largest VPN service charges about 70 euros per annum and offers VPN servers in 75 countries – That is by far the largest assortment. There's a money-back guarantee for the first 30 days.

VyprVPN
In case of this German VPN provider, users can use access points in 43 different countries for 56 euros (~RM236) a year. The free variant limits the data traffic to 500 MByte.

CyberGhost
CyberGhost maintains access points in 23 countries, and charges a fee of about 25 euros (~RM105). Those who can live with a reduced speed and fewer access points can also use the service for free.

The websites that you access through the VPN allocate you geographically to the country that hosts the VPN server. Consequently, these websites may offer you services that are different from the services that are offered to another visitor – No wonder VPNs are so popular among users who want to use foreign streaming services!

Special functions under Android

Under Android, F-Secure Freedome VPN is to be installed via the Google Play Store. The installation process is, to a large extent, identical to the setup process for the iOS app. However, since programmes on Android devices can have a lot more access rights for the system, this version offers the option of checking the smartphone for programmes that want to tap off your data right from the moment at which the VPN tunnel is established. Consequently, the 'App security" option only exists in the Android variant of the software.

After the installation process has been completed, the app requests access to all the network traffic, so that it can encrypt the entire flow of communications. In addition to offering the aforementioned option of scanning for malware, the Android version of F-Secure Freedome VPN also makes it possible to flag secure WLANs. If the smartphone is connected to a wireless network, you can set up direct connections with other devices in this wireless network, which would otherwise not have been possible with a VPN connection. This enables you, for example, to use your smartphone to access a media server in the home network, without having to deactivate the VPN beforehand.

To do this, access the app settings and tap the 'Reliable WLAN networks" option. Mark the corresponding networks with tick marks and tap 'OK" to confirm. Now, activate the 'Launch programme at device start-up" option in the settings section. The app will now be loaded automatically after the device has been rebooted. The rest of the operation corresponds to the operations under iOS. The Android version also allows you to use our premium code to extend the duration of the testing period to six months.

Usage under Windows and Mac OS

The process of installing the programme under the two major desktop operating systems is extremely simple: All you have to do is run the Installer, accept the conditions of use and click 'Install". It can be downloaded from chip.com.my. The major advantage of Freedome: After installation, the software directly integrates itself into the respective operating system, and adjusts the network settings. Consequently, you do not have to change the configuration yourself.

INFO

Set the right access point

Whether you should choose a VPN server in Asia, Europe or the USA depends on your requirements. Asia offers more anonymity, while servers in Europe are beneficial from the point of view of data protection.

Malaysia Use these local servers for your online banking transactions. Many banks block exotic VPN access points that are located in other countries.

USA The servers in the USA primarily offer the option of circumventing geo-blocks, which makes it possible, for example, to use your Netflix account to access US-based contents.

Asia Servers in China allow you to surf with a large degree of anonymity. However, some local services may, as a precaution, refuse to grant you access.

Europe Servers in Europe are governed by strict data protection regulations. For the best possible data security, you should use a VPN node located in a Eurozone country.

VPN on the Apple iPhone

To set up F-Secure Freedome VPN under iOS, you must install a certificate **1**, bevor Sie das VPN einschalten **2**.

VPN for desktop devices

Under Windows, VPN services integrate themselves into the system as additional network adapters. This ensures that every data packet is sent to the VPN server in an encrypted form.
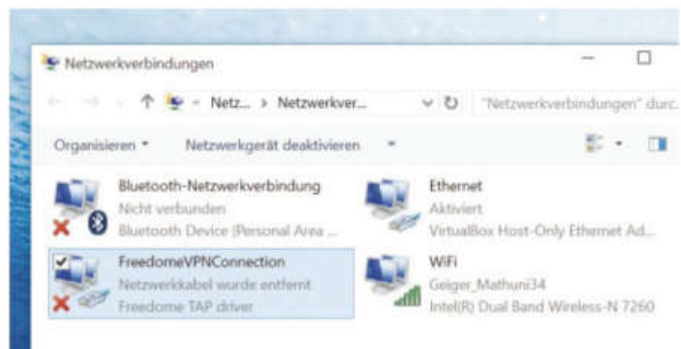
Annonymity Through TOR

A VPN isn't the only way to surf the internet in a secure manner. Many users also use the free TOR network, which relies on the onion-routing technology. In this case, the protection is based on a combination of encryption and anonymisation of the users. The data packets follow a route – which is selected via a random generator – that runs through multiple TOR nodes, which are basically nothing but stopovers. The TOR client encrypts the packets. Each node only knows the next station – and not the sender and the destination of the data. However, not even the TOR network can offer foolproof protection against snooping attempts. Certain nosy authorities have probably developed the ability to spy on the input and output nodes in particular, but the effort involved is enormous. Consequently, TOR is still a good way to surf the internet in a more secure manner.

Using TOR in conjunction with Windows

The TOR Browser package for Windows is a pre-configured piece of software, which allows you to access the internet directly through the TOR network. It comprises the ESR (extended support release) version of the Firefox browser, which is well-secured through additional plug-ins, and automatically sets up a connection with TOR. To install it, run the EXE file and follow the wizard. As soon as the process has been completed, the system throws up a window, in which you can specify the basic settings. All you have to do is click 'Connect". You will then be greeted with a congratulatory message. Now, click the 'Test TOR network settings" option to check whether everything is working properly.

Before you start accessing websites, you should call up the 'Privacy and security settings". This section allows you to check the basic settings. The TOR Browser uses the private mode by default, which means that browsing histories and cookies are not saved locally. Furthermore, plug-ins such as Flash are deactivated. However, the slider for the 'Security level" is initially set to 'Low" - You should change that. The higher the slider, the more secure your online expeditions. This is accomplished by, among other things, deactivating browser features. For example, if you set the slider to 'Lower medium", HTML5 videos can only be played within the click-to-play framework; the execution of JavaScript is also curtailed. At the 'Upper medium" level, the browser completely deactivates JavaScript for HTTP connections. At the 'High" level, it also blocks several image files. In practice, 'Upper medium" is a good choice.

TOR for Android

Android users can turn to Orbot, which is an official app for the TOR project. If you want to be able to make full use of the complete range of functions, the device should be rooted. However, Orbot can also function without root-access. The app can be installed via the Google Play Store. Launch Orbot and grant it permanent root access. Now, put your finger on the big button for a few seconds to activate TOR. Then, access the Orbot settings and activate the 'Request for root access" and 'Transparent proxy" options, so that your apps will be able to use the TOR network to access the internet. Furthermore, you can also decide whether all the programmes ('Route everything

Browsers and apps for TOR

The easiest way to use TOR is by relying on pre-configured software solutions. They make Windows **1** Android devices **2** and iOS devices **3** compatible with onion-routing.
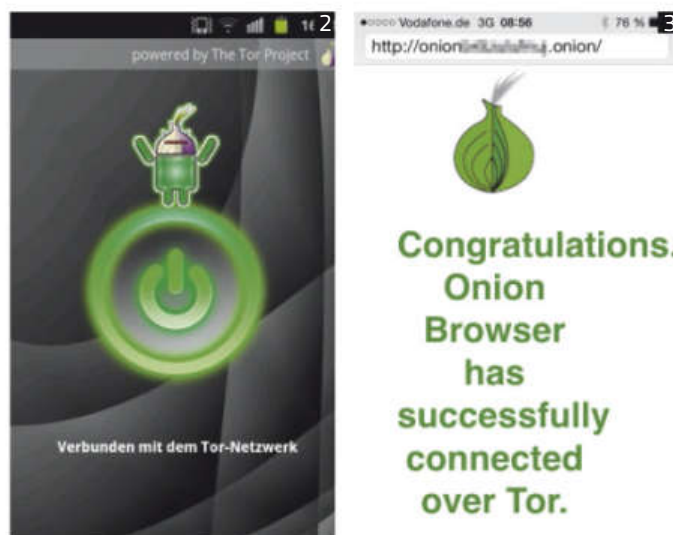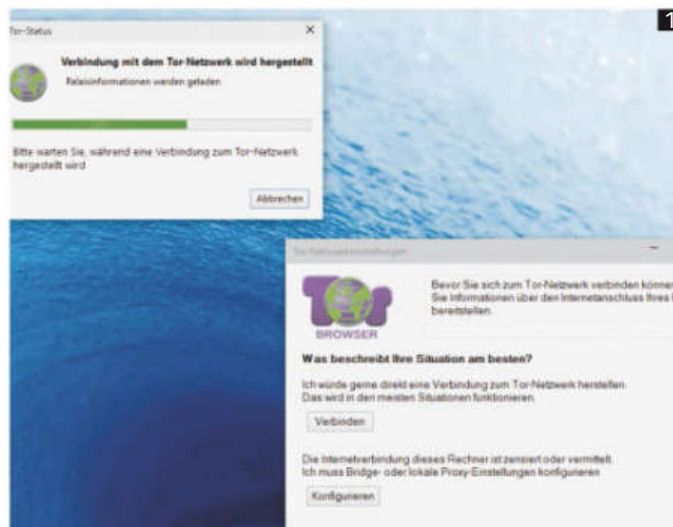
through Tor") or just the selected ones ('Select apps") should use the TOR network. We recommend starting small and adding additional apps later.

TOR for iOS

There is no official TOR app for iOS, but a few third-party programmes are available. For example, the Onion Browser is quite recommendable. It routes the internet access operations conducted by iPhones and iPads through TOR. The programme costs 99 cents, and it's very easy to use. Simply allow TOR to be used when the app is launched. You can visit the website check.torproject.org to check the connection.

Weather Report

Networked sensors on the road tell the car where it's raining and where the fog has reduced visibility. If the visibility threatens to become too poor for automatic cars, the driver is told to continue his journey in the manual mode.

Network Infrastructure

The networking of the road is based on a hybrid network comprising mobile communications, broadcasting and V2X communication. This vehicle-to-X communication is supposed to become the primary pillar of the communication between vehicles and the infrastructure.

Talking Construction Sites

Another feature of the networked road: Temporary structures on the road – such as temporary construction sites – can contact the car.

120

Intelligent Road Signs

In the long run, signposts and traffic lights will receive equipment that will enable them to communicate with vehicles. Thanks to this, it will become possible to dispel traffic jams or efficiently redirect vehicles by influencing the flow of traffic in a targeted manner.

How Automated Cars See The Road

At least two sensors cover each direction, in order to scan the car's surroundings. For the frontal view, BMW is using a radar system with a range of 200 to 250 metres and a stereo camera, which can determine distances and differentiate between different objects. Laser scanners and ultrasonic sensors are deployed on both sides of the vehicle.

The car uses the data collected by all the sensors to produce a virtual image of its surroundings. Depending on this, it knows whether it can change lanes and when it can get back into the original lane after passing another vehicle. To determine its exact position, the vehicle falls back on a locally-stored card, which contains precise information regarding the road.

Highways Go Digital

The German Ministry of Transport plans to cover a section of the country's A9 highway into a test site for networked driving

By Dominik Hayon

This year, a digital highway test route is expected to come into being on a section of the A9. Basically, it's all about the manner in which cars and the infrastructure can communicate with each other – and the goals of the communication are actually quite varied. The industrial sector, the science sector and the Ministry of Transport want to collaborate closely with each other to find out how traffic jams and environmental pollution can be reduced, and how the safety level and workload can be optimised. A test site is also expected to be designed for self-driving and networked cars.

This test site will make it possible to test new technologies under real-world conditions. Furthermore, systems that warn wrong-way drivers and the other drivers in the danger zone are currently being tested. Towards that end, an automatic detection system triggers optical and acoustic warnings in the respective area.

Mobile communications and broadcasts are also used to trigger warnings in the surrounding area. Compared to classical traffic announcements, the response time sinks from several minutes to a few seconds. The practical tests for this system are scheduled to be carried out on the slip roads for Garching and Eching.

The roads can only be networked if the corresponding network infrastructure is present. The expansion of 5G-networks with latency periods of less then 1 ms is of decisive importance for the real-time communications. The new ITS G5 wireless standard – which is a different version of the WLAN standard – enables the cars to simultaneously communicate with each other (V2V) and the infrastructure (V2I). This makes it possible to span ranges from 100 to 1000 metres.

As far as the flow of traffic goes, nothing is expected to change once the project is launched – Networked and non-networked vehicles will simply travel side by side. ▣

BACKGROUND

Traffic forecasting

The traffic volume in Germany is rising. In order to accommodate it, roads must direct cars in a more skilful manner.

CARS PER 1000 (ROADWORTHY) RESIDENTS

Year	Value
2010	631
2030	694

By 2030, the truck traffic will grow almost four times as quickly as individual transport. Consequently, networking will become ever more important for trucks – Daimler is currently testing automated models in the USA.

MOTORISED INDIVIDUAL TRANSPORT
(FIGURES IN BILLIONS OF PASSENGER KILOMETRES)

Year	Value
2010	902.4
2030	991.8

FREIGHT TRAFFIC ON THE ROAD
(FIGURES IN BILLIONS OF TONNE KILOMETRES)

Year	Value
2010	437.3
2030	607.4

SOURCE: BMVI (FEDERAL MINISTRY OF TRANSPORT AND DIGITAL INFRASTRUCTURE, GERMANY)

16 BIL.

euros' worth of economic benefits are expected to be facilitated by intelligent mobility in the year 2020

Moving in queues

In a so-called 'platooning' sequence, multiple trucks follow a leading vehicle – Networking and automation make it possible. The throughput on the roads can thus be increased five-fold, while the fuel consumption of the platoon members sinks by 15 percent.

Test field A9

The course of the A9 in Bavaria – This is where the digital highway test route is expected to emerge in 2015.

Hof
Bayreuth
Nuremberg
BAVARIA
Munich

Kiel
Hamburg
Schwerin
Bremen
Hannover
Potsdam
Berlin
Magdeburg
Düsseldorf
Erfurt
Wiesbaden
Mainz
Saarbrücken
Stuttgart

Hof
Bayreuth
Nürnberg
München
BAYERN

Data Recovery in the Most Serious Cases

Data recovery specialists – such as the professionals at Kroll Ontrack– are often the only ones who can help when drives go belly-up or data is lost *By Christoph Schmidt*

I t's every PC user's worst nightmare: The computer can no longer detect the hard drive or SSD. Since the data was backed up a long time ago, or something went wrong during the process itself, there is now a possibility that irreplaceable private photos, expensive music collections and important documents may be gone for good. After all, if the system can no longer find the drive, the only thing that data recovery programmes and live rescue systems can do is grasp wildly in the dark. In most cases involving such damage, even experienced computer-tinkerers have to throw up their hands in abject surrender – In the worst-case scenario, their rescue attempts can actually make the damage even worse.

However, such a situation can present professional data-rescuers with an interesting challenge. In their clean-room laboratories, they use extensive equipment and spare parts to work on opened hard drives, or disassemble SSDs and USB sticks right down to their memory modules.

In this way, the data on the defective drives can often be read out and pieced together.

Such high-tech specialists work in an office complex in a commercial area in Böblingen, Germany. This area houses the German branch of Kroll Ontrack, one of the world's largest data rescue service providers. We were allowed to look on as the professionals did their work. Stefan Heib, who is in charge of the logistics and purchasing department, accepts 20 to 30 new jobs on a daily basis. 'The spectrum ranges from accidentally-formatted USB sticks to racks that have been damaged by extinguishing water", he explains. The technicians make the drives readable and create a 1:1 image, from which the workers in the data recovery department extract the files. No matter how hopeless the situation looks, the customers receive a new hard drive containing their data in 90 percent of the cases.

What to do in case of the worst-case data-related scenario?

For the data rescuers, each case begins with a catastrophe that is more or less dramatic. 'When it comes to private users, data carriers are often damaged by accidents", says Kathrin Brekle, who is the marketing manager at Kroll Ontrack. Typical scenarios involve USB hard drives that fell off the table while they were in operation, or notebooks that were handled in a rough manner.

In case of such impacts, the reading heads – which are just a few nanometres above the rotating magnetic disks – bump into their sensitive surface, make ruts and eventually suffer damage. 'If the firmly-implanted servo-tracks and servo-sectors get ruined, the reading head can no longer orient itself towards the disk", explains Martin Hiller, who manages Kroll Ontrack's clean-room laboratory.

Physical damage: Hard drive starts clicking

In such a case, a constant clicking sound emerges when the drive is booted up. The reading head makes this noise when it searches in vain for the initial position. Consequently, the drive does not report a state of operational readiness, and the computer cannot detect it. Under such circumstances, only a data rescue laboratory can help. You should immediately put the computer or drive out of operation, while making sure that the disk is not exposed to any more shocks. In fact, every attempt to access the drive will simply damage it further.

In case of an internal hard drive, you can try the following: Turn off the computer and remove the data and power cables from the affected disk. As a precaution, wait for a few minutes before you turn on the computer. When the device is in operation, insert only the (wider) power plug of the hard drive and listen closely, in order to find out whether it once again starts clicking rhythmically. If it doesn't, connect the narrower data connector: Ideally, the drive will now be detected, and you can try to copy the most important data to another location. If this method doesn't work, you should immediately disconnect the drive from the power supply.

The mechanically-damaged SSDs, USB sticks, mobile phones and tablets that find their way to Kroll Ontrack are often still intact on the inside: The device or its interface is the only thing that is no longer working. In such a case, the data rescuers can at least repair the device to such an extent that the data can be read out.

Logical errors: Data loss

However, Kroll Ontrack also receives many drives whose hardware is still intact. They also appear in the Windows 'Disk Management' section, but the saved data is nowhere to be found – This can happen because of a file system error, or because a partition was deleted or formatted. 'In such cases, one must immediately ensure that no more write-access operations are being carried out on the drive, since such operations overwrite invisible data that is still present", says Martin Hiller. If the problem involves the hard disk that hosts the Windows partition, you can install it in another PC or a USB casing, and try to back up the data using a rescue tool. If this doesn't work, the disk has to be sent to the data rescuers.

Emergency plan for data loss

If data becomes unreadable because of a mechanical defect, you should immediately deactivate the drive. Otherwise, you should, under no circumstances, copy new files or programmes onto it.

● HDD is not displayed in the BIOS/Disk Management section, and ticks rhythmically: Deactivate and contact the data rescuers.

● Disk not detected, noises normal: Boot up from a USB stick, connect the drive when it is write-protected, and copy the data.

● Files/Folders deleted, partition formatted: Avoid write access operations! Try using a data rescue tool like Recuva (see below).

● If nothing works and the drive contains important data: Contact professional data rescuers.
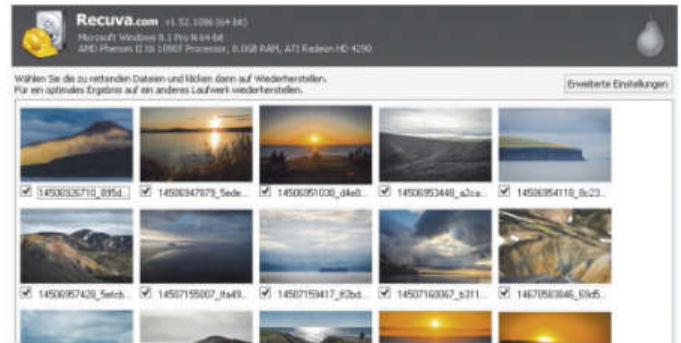
If the files have not yet been overwritten, you can use Recuva to recover them

These types of drives are affected

Most of the jobs that Kroll Ontrack receives involve defective conventional hard drives – which is logical, given that the technology is widely used. Every seventh case involves an SSD or another Flash memory.

- 72% hard drives
- 15% SSDs/Flash memories
- 13% RAID/Virtual machines
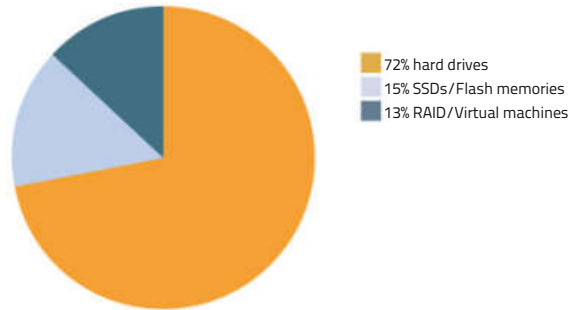
Stefan Heib, the head of logistics at Kroll Ontrack, receives and dispatches 20 to 30 devices every day and manages the spare parts

Repairs in the clean room

The incoming drives are initially connected to a copying station. These are PCs with a variety of controllers, as well as ports that are even compatible with exotic and outdated devices. The software developed by Kroll Ontrack operates them directly, and can thus create images of hard drives that are not being detected by Windows on account of internal controller-related or firmware-related problems. If it becomes apparent that the drive has, for example, been damaged by a head crash, it is sent to the clean room laboratory.

A hard disk that has suffered a head crash must be opened, in order to recover the data associated with the undamaged tracks

Clean room: Operating on open disks

At first glance, Kroll Ontrack's clean room hardly looks different from a normal laboratory – However, the materials and the ventilation system generate an atmosphere that is practically devoid of dust. In this environment, the technicians can open and activate the hard drives, which would, under normal circumstances, constitute a perfect recipe for the destruction of the said drive. 'The visible movements of the reading head make it possible to identify the problem", says laboratory manager Martin Hiller.

If it becomes apparent that the reading head, motor or controller is defective, the technicians can fall back on a huge archive of spare parts for hard drives – The Böblingen site alone stores 20,000 drives made by different manufacturers. 'The spare parts have to come from a perfectly identical model, because the manufacturers often change details from batch to batch.", explains Martin Hiller. However, installing the parts doesn't always complete the job. For example, even if the reading head fits perfectly, the displacements associated with its two heads might be different (refer to the image on the right) from the original. Such a misalignment can only be detected under a microscope, and it can be balanced with the help of the reading software. All the hard drives are thus brought into a condition in which the read-out station can at least copy the data that does not lie in the damaged parts.

Martin Hiller, manager of the clean room laboratory, examines an opened hard disk at his dust-free workstation

Flash memory: Encryption data trap

In comparison with hard drives, SSDs present the data rescuers with a different set of problems. In principle, they are less sensitive, since they contain no moving parts. Furthermore, the data lies in separate memory chips, which Martin Hiller and his colleagues can remove from the disk and read out, if the SSD controller is defective. However, it can, depending on the type of SSD, be very tricky to re-assemble the files correctly. 'We can read out the raw data in 99 percent of the cases – But if the SSD is encrypted on the hardware-side and the key lies in the defective controller, it's practically impossible to extract the actual files", explains Mr Hiller. Consequently, you should clarify the chances of successfully rescuing data from a specific SSD model over the telephone before you dispatch the device.

It's relatively easy for the data rescuers to read Android-based mobile phones and older iOS devices. However, if the situation involves devices ranging from the Apple iPhone 4s and the iPad 2 onwards, or encrypted Android devices, even they cannot access the data unless the system software is running. On account of their tiny structures, microSD cards are also very problematic for the data rescuers. Consequently, the important data that is saved on such devices should be backed up regularly.

The microscope indicates that the reading heads (right) have been displaced. This must be taken into account when the disks are being read

Kroll Ontrack has a huge stock of spare parts for hard drives, which includes many different reading heads

Solving the file puzzle

When it comes to data recovery, making the drive readable is just the first step, because the files still have to be extracted from the raw data. Towards that end, Kroll Ontrack's data recovery engineers create a 1:1 image of the drive, which contains all the physically-readable data. When it comes to conventional hard drives with a very common file system, it is often relatively easy to copy the files out of the image. It becomes trickier if the situation involves SSDs with a defective controller. Under such circumstances, the technicians have to read each memory chip separately, since the files are – as in a RAID system – distributed across multiple chips, and must be put together correctly. Furthermore, when it comes to SSDs featuring hardware encryption, the data rescuers can only read the data if they obtain assistance from the manufacturer.

The job of the data recovery engineers becomes really complicated if the situation involves interlaced virtual systems, such as those that are found in the professional domain. For example, in such a situation, the experts have to restore a database that runs in a virtual system, which lies in a container file on a file system that is distributed across multiple disks of a RAID system. Under such circumstances, hardware and file system errors affect all the levels of the system. 'Like a matryoshka doll, we then have to repair one level after another in order to finally reach the data", says Mr Holger Engelland, who is in charge of Kroll Ontrack's data recovery laboratory.

Data loss: Even professionals make mistakes

Kroll Ontrack's biggest jobs come from computing centres, which are supposed to be protected against all data-loss scenarios. 'Even admins are not immune to operating errors", says Engelland. In such cases, several terabytes of mail archives, customer data or design outputs can vanish in the blink of an eye – Or the situation can result in a real catastrophe: 'One of our most complicated jobs involved a computing centre in which a fire triggered the sprinkler system, which then swamped several racks and tape backups." A machine that could clean and copy the tapes was then built at the Böblingen laboratory. Kroll Ontrack even managed to do its job successfully in several dramatic cases: The company even managed to recover research results from a hard drive that was found in the burnt-out wreckage of America's Columbia space shuttle. When it comes to data recovery, the situation becomes a lot worse if the data is overwritten – In such cases, there is often nothing that can be done. This is why it's so important to ensure that nothing is written on a drive with deleted data.

Regardless of the magnitude and level of difficulty of the job, each one of Kroll Ontrack's jobs is handled in a similar manner: The client gets in touch with the company over the telephone or via the website, and a determination is made as to whether the problem can be solved by sending the defective item to the company, by running tele-control operations, or by deploying a Kroll Ontrack team that would have to be present onsite. The last of these options is considered when the highest level of data security is called for. The diagnosis of a hard drive that is sent to the company costs 90 euros. In such a case, the client receives a detailed list of the files that can be recovered. If the client decides that he wants the data to be recovered, Kroll Ontrack's experts copy the files onto an encrypted USB hard drive and send it to the client. In such a case, Kroll Ontrack charges the client a lump-sum fee of several hundred euros, which covers all the spare parts and additional expenses.
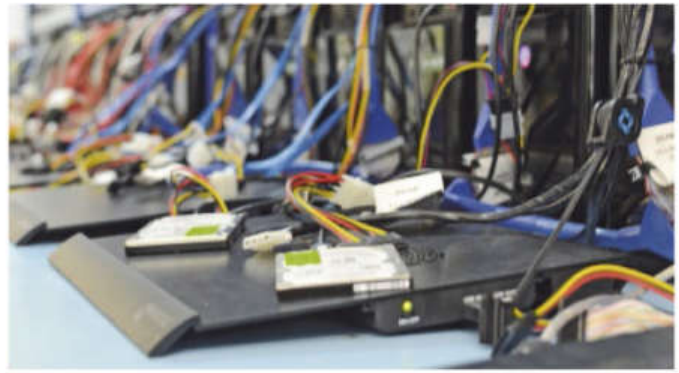
Kroll Ontrack's read-out stations can simultaneously create images of dozens of drives

The most common causes of data losses

Most data losses occur due to hardware defects. According to Kroll Ontrack's statistics, data losses caused by operating and software errors are next in line.

- 66% drive damage
- 14% human error
- 6% software errors
- 3% power failure
- 4% unknown
- 7% miscellaneous (accidents, fire etc.)
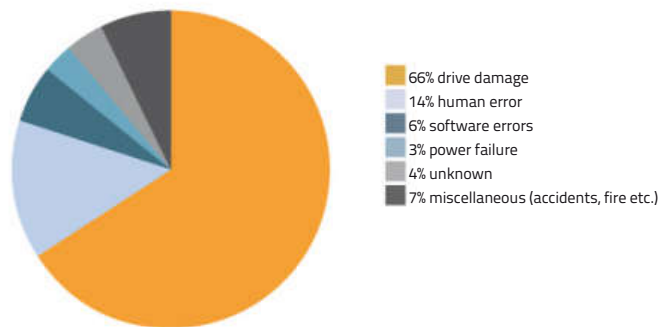
Holger Engelland, leader of the data recovery team, uses remote access to start recovering a file for a client
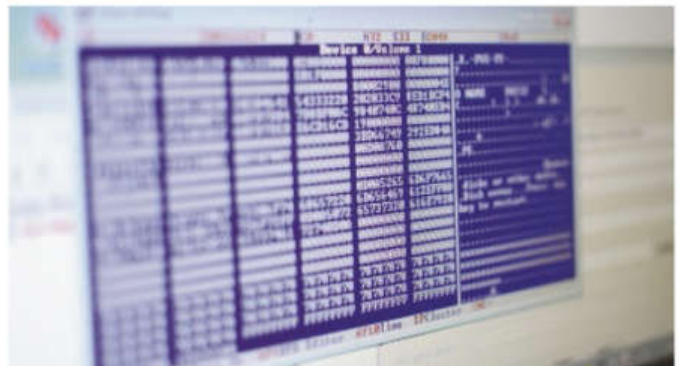
The data rescuers use special in-house software to analyse raw data and assemble files
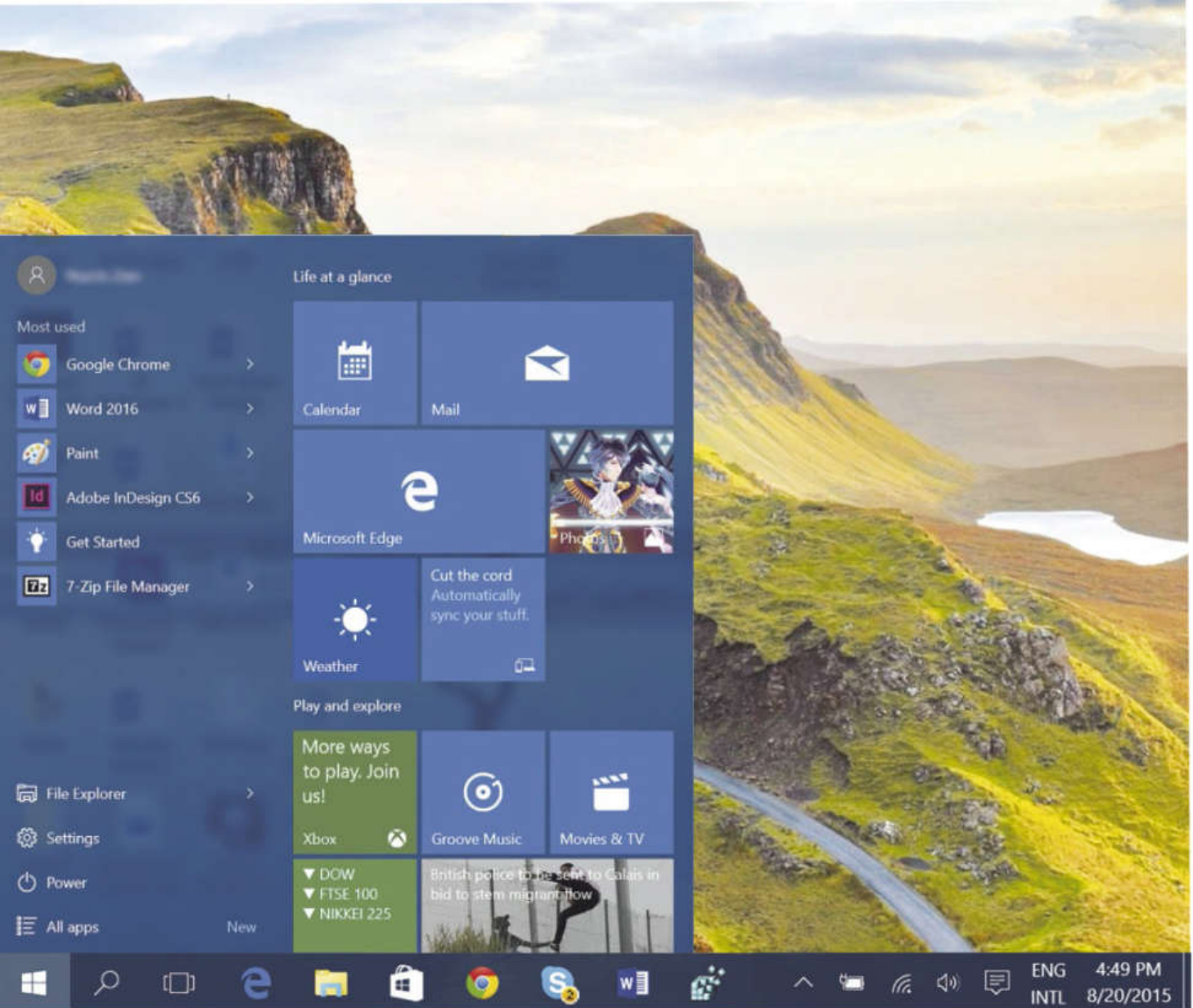
Windows 10
Hidden Features

Microsoft's latest operating system is easy to use, but it has also buried a lot of features so deep into the system that it's quite difficult to look for them. This article shed some light on a number of them By Jörg Geiger

Microsoft wants to achieve two things with Windows 10: Reconcile traditional users with familiar elements such as the start menu, and upgrade the operating system technologically with new functions such as the Cortana language assistant and the Microsoft Edge browser. Unfortunately, Windows 10 has another familiar element: The operating system's true capabilities are not evident at first glance as Microsoft does not want to overwhelm normal users with too many details.

This makes it a lot harder for ambitious users who want to try out as many Windows features as possible to adapt the system to their requirements. This article shows you how to access these functions. We used a previous version of Windows 10 – Build 10122 – to investigate the hidden features.

Start Menu and Desktop

The classic Start Menu makes a comeback with Windows 10. We show you its hidden features, along with other new features for the desktop

1 Start Menu without Apps

One of the biggest features of the new Windows 10 operating system is the Start Menu that makes its return with a brand new look. Unlike the traditional menu however, this new one also comes with the inclusion of Live Tiles that were first seen in Windows 8. For those who just want the old Start Menu back, this can be done, but it does take a bit of patience from the user's side as it involves a bit of repetitive work.

First, put up the Start Menu by clicking on the Windows key, then right click on the Live Tile and choose the 'Unpin From Start" option. Do this for all the tiles until you're left with just the Start Menu.

2 Create Virtual Desktops

Those who use several programs in parallel are well-acquainted with the problem of the constricted desktop, which makes the user lose track of things. Windows 10 uses virtual desktops to rectify the situation. For example, you can arrange your opened windows on these desktop clones based on their themes – One for work, one with multimedia applications and so on. You can use the [Windows]+[Tab] to display an overview of the virtual desktops, while the plus sign enables you to add new desktops.

3 Configure Your Lock Screen

Windows 10 has modified the lock screen that is displayed before the login screen. In addition to the time and date, one can see various wallpapers and advertisements for new apps through the 'Windows Spotlight' function. This can be deactivated under the 'Personalisation" option, which can be found in the 'Settings" section. Click the 'Lock screen", and choose an 'Image" as the 'Background", instead of 'Windows-Spotlight".

4 Transparency in The Start Menu

Should the start menu have transparency features? 50 percent of the early testers got a transparent start menu, while others didn't. You can adjust the appearance of the start menu through the registry and the path 'HCU\SOFTWARE\Microsoft\Windows\CurrentVersion\Themes\Personalise". If the value of 'EnableBlurBehind' is set to '1', the start menu is transparent, and if you don't want it to be so, you can set the value to '0".

MINI-HACKS

● **Notifications:** The notifications allow you to set certain settings – such as turning on the WLAN – in a speedier fashion. To do so, click the speech bubble in the Systray.

● **Task bar:** To adjust the task bar's system tray, access the task bar's context menu, click "Properties" and then select ''Modify".

● **Command line:** The command line is located right under the snazzy desktop. In Windows 10, it can also execute copy-and-paste operations through the key combination [CTRL]+[C] and [CTRL]+[V].
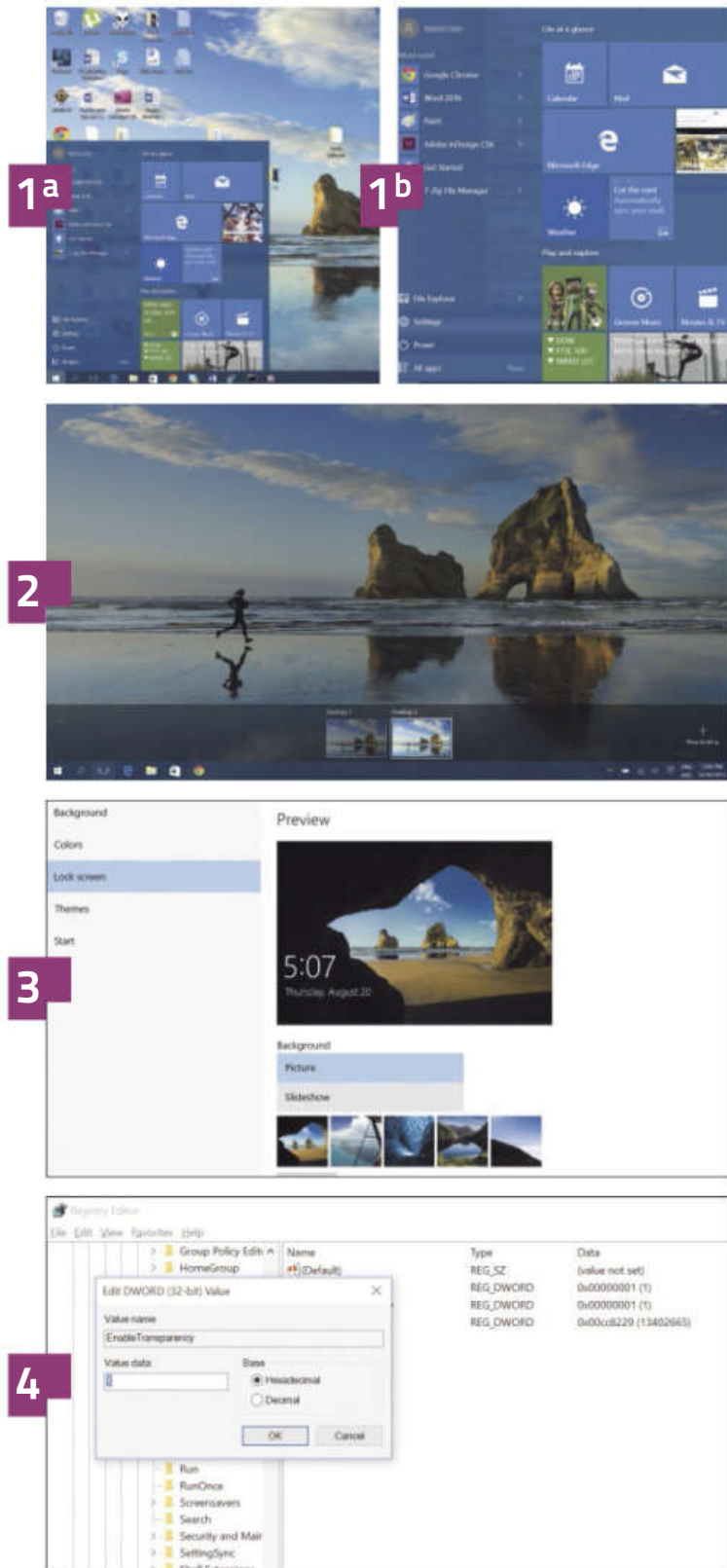
Surf with An Edge

The new Edge browser replaces the age-old Internet Explorer. That said, its spartan user interface hides many features, which we'll highlight in this article

1 Activating More Functions

Users of Firefox and Chrome should be familiar with this feature: Those who want to try out more functions and settings can activate additional options via "about:config" and "about:flags". Microsoft Edge also features a hidden website. It can be accessed through the "about:flags" command, which simply needs to be typed out into the address bar of Edge. The range of options is nowhere near as comprehensive as the ranges offered by other browsers, but Microsoft Edge does allow users to activate experimental JavaScript features and optimise the touch-based operations. Most of the changes make it necessary to restart the browser.

2 Deactivating Insecure Flash

Microsoft Edge has PDF and Flash directly installed in the browser. The advantage: Users don't have to worry about updating these components. Those who wish to deactivate Flash for security-related reasons however must do so via the 'Settings" menu, which can be made to appear by clicking the three points in the menu. Scroll down up to 'Platform controls" and set the 'Adobe Flash Player" switch to 'Off".

3 Securing The Browser

In Microsoft Edge, the most important security settings are hidden under the Settings menu. Set the "Block pop-ups" and "…SmartScreen filter…" switches to "On". When it comes to "Cookies", Edge allows all cookies in its default setting, but you can prohibit this with the help of the "Block all cookies" option.

4 Using Shortcuts to Speed Up Edge

Microsoft Edge is a browser that has been pared down to the bare necessities, and has been designed to be very fast. Those who want to speed it up even further can use shortcuts for routine tasks. For example, the key combination [Alt]+[D] takes you directly to the URL line, the [CTRL]+[TAB] combination lets you toggle between opened tabs and [CTRL]+[H] speedily opens the history. You can use the asterisks in the address bar to add interesting articles to the reading list, which can be called up quickly through the key combination [CTRL]+[G].

MINI-HACKS

● **Private mode:** To activate this mode, open a new tab and click the icon bearing the image of a person. Select the "Open new InPrivate window" option from the pop-up menu.
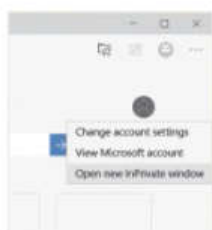
● **Reading mode:** The reading mode will appeal to those who spend a lot of time using the browser. When the book symbol in the URL tab is clicked, Edge filters out disruptive elements.

● **Edit mode:** Edge can process websites in real-time and save notes/markings. Visit a website and click the paper-and-pen icon.
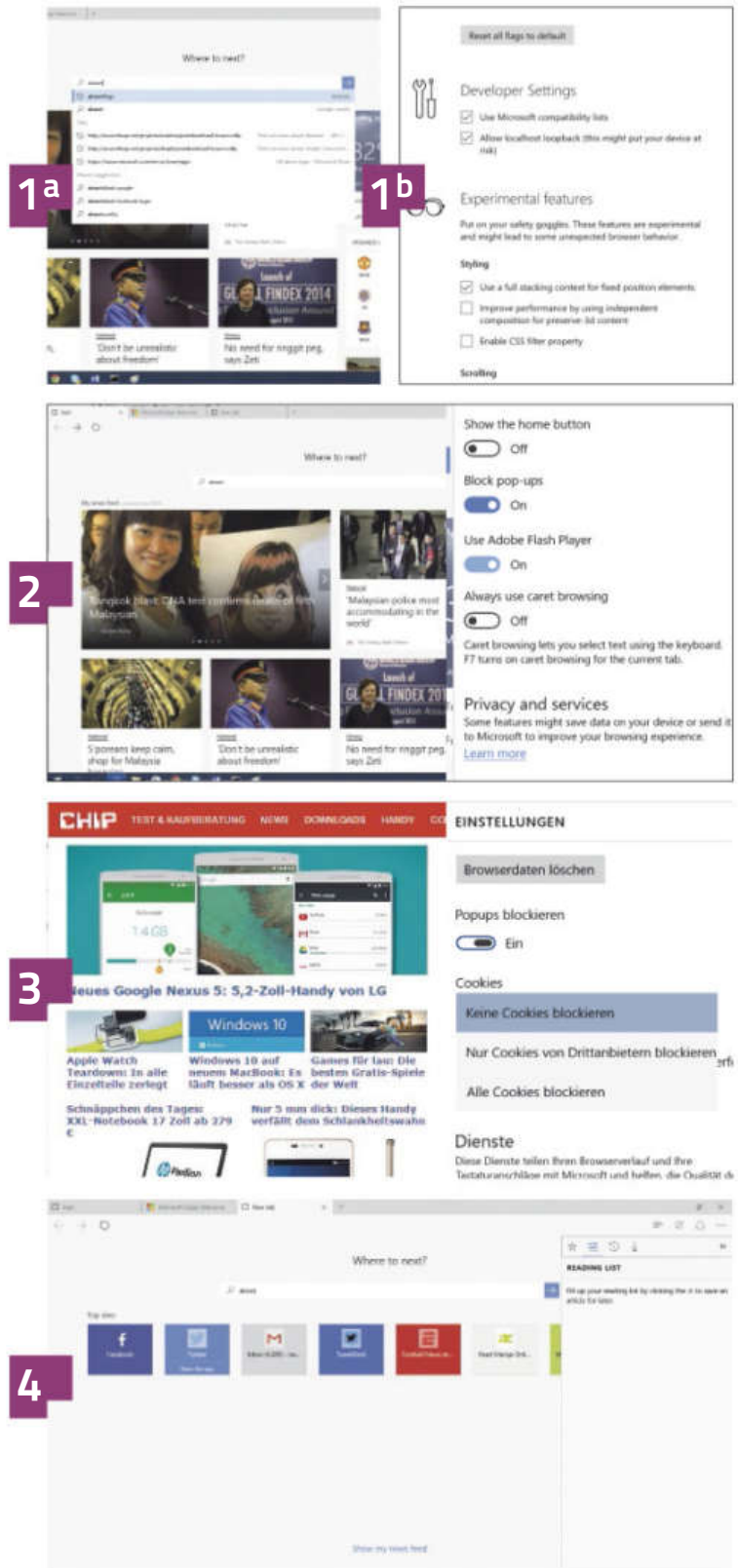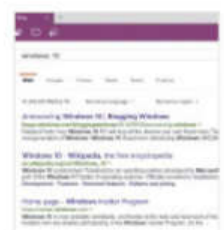
Speaking with Cortana

With Cortana, Microsoft has given Windows 10 an assistant that heeds your words. However, Cortana can do a lot more than just that. While Cortana isn't really supported in Malaysia just yet, you can switch the Windows 10's regional settings to America (US) and activate it then

1 Cortana Quick-Start

Cortana is a central new component of Windows 10, and is activated right from the beginning. An input field bearing the text "Ask me something" is located to the right of the task bar's Windows flag. This is where Cortana is hidden. To carry out the basic configuration, click the input field with the mouse, and select the settings menu (gear-wheel icon). First, you have to specify whether you want to use Cortana. If you do, go to 'Change my name" and enter the name that the assistant is to use when it is addressing you. To use Cortana, click the microphone icon and ask your question.

2 Activating Voice Recognition

In the settings menu, you can use the 'Recognise my voice" option to ensure that Cortana only obeys your commands. Only when you say 'Hello Cortana" will the assistant respond. In order to make this happen, you have to set the 'Cortana answers when I say 'Hello Cortana"" parameter to 'On". Cortana asks you to repeat six sentences, in order to become familiar with your voice.

3 Launching Programs

Cortana has several tricks up her sleeve, and can even launch Windows tool such as Paint. All you have to do is say "Launch Paint" in a clear voice, and Cortana will open the image processing application for you. Alternatively, you can also use the "Open" command to launch programs. This doesn't just work with the built-in Windows tools – It also works with third-party software. For example, the "Open Chrome" command launches Google's Chrome browser – if it's installed.

4 Important Commands

What's more, Cortana provides all possible pieces of information on demand. For example, the voice command "Weather" will be answered by providing you with information regarding the current weather conditions at your location. The assistant can also perform calculations for you. In principle, you can also forward all of your search terms directly to Cortana, because Cortana automatically runs a Bing search if you do not voice any suitable commands.

MINI-HACKS

● **Browser assistance:** Cortana can also pop up in Edge. If you want to look something up on a website, you can "Ask Cortana" with the help of the context menu.
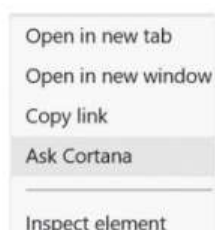
● **Tuning Bing:** Cortana only uses Bing to run internet searches. You can modify the current search settings by using the gearwheel icon and the "Bing SafeSearch Settings" facility.
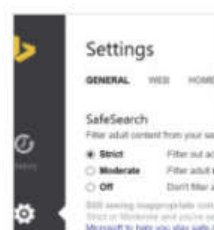
● **Reminders:** Cortana behaves like a real assistant, and can remind you about important appointments. You can set a new reminder by using the "Reminder for today evening" option.
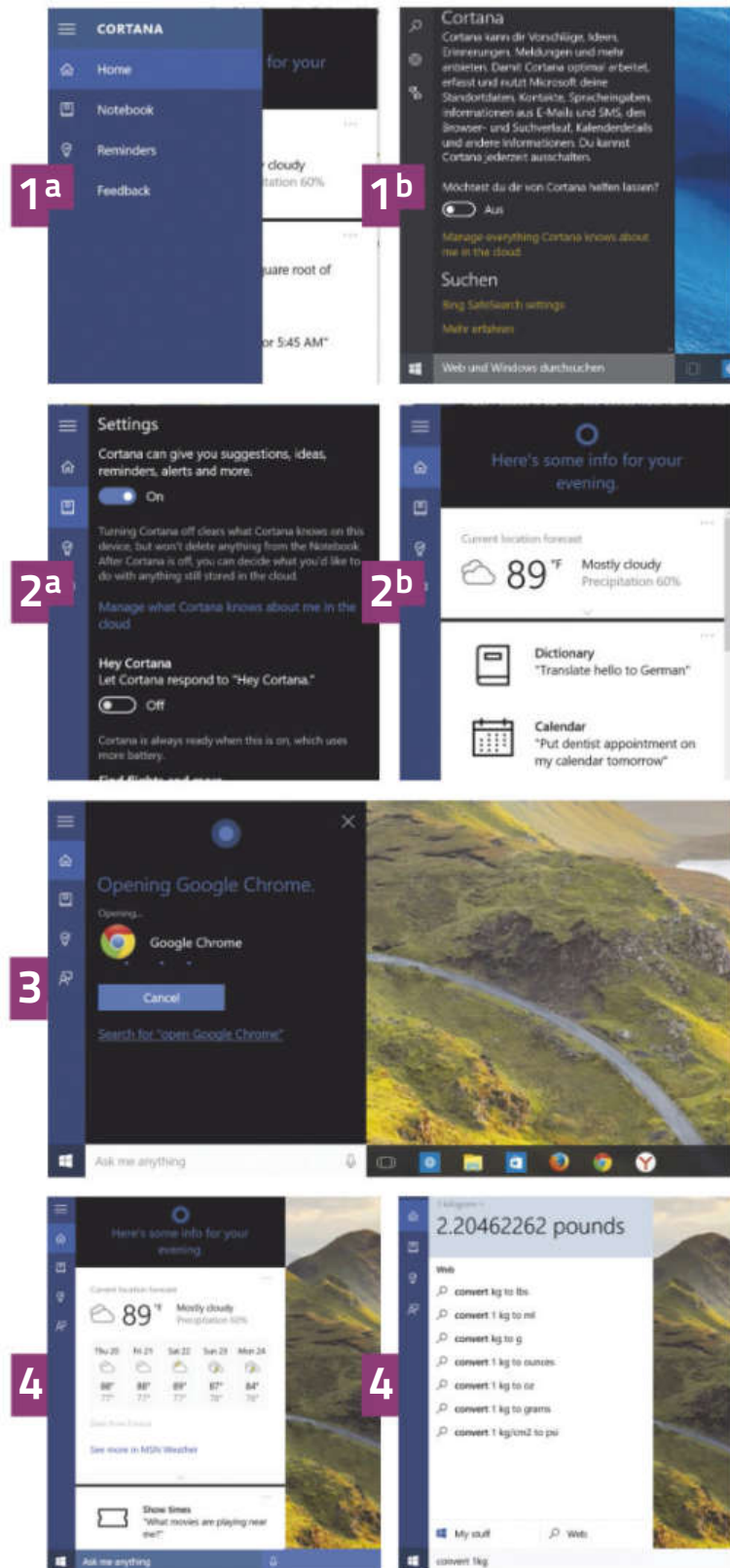
See the World Like a Computer

Highly specialised computers can paint a picture of their surroundings, but it's going to take them a long time to see as well as we do   By Markus Mandau

The skill of seeing needs to be learned. As adults, we believe that this ability is as natural as the ability to breathe. However, children will practise their sight-related skills until they reach the age of six, which is when they start seeing and interpreting their surroundings like we do. They spend their first two years sharpening their gaze, by constantly trying to focus on objects. They also practise the skill of visualising a three-dimensional image of their surroundings at the same time. The basic principle is the same as that used by 3D goggles given out by theatres - the images seen by the right eye are somewhat different from the left eye. The brain learns to use the differences between the two images to generate depth-related information and a three-dimensional impression of the environment. However, this environment is an environment in which only those objects that we focus on appears sharp. The child's eyes and brain are fully trained after it reaches the age of six. Computers have also been

learning to see for several years

The first neural network was launched in the year 1957, with the Perceptron algorithm. This network could find camouflaged tanks in a forest – if the weather conditions were favourable. Today, we use the face recognition capabilities associated with the domain of photograph management. However, this is basically a software application that processes code in a tenacious manner. In the future, it will be replaced by a neural network on our computers, which will learn from its mistakes like a child and keep improving its capabilities by modifying its code. The more photographs the neural network reads in, the more familiar it becomes with the motifs and viewing angles that we prefer. It becomes a photo-partner that makes suggestions, establishes order and knows what it has to focus on. Neural networks need to improve a lot before they can handle such a complex scenario, but a large amount of progress has been made in recent years..

Furthermore, computers are also being equipped with sensors, which they can use to appreciate their surroundings and movements from a spatial point of view – This would be the equivalent of the child's 3D gaze. Microsoft kicked off the trend a few years ago with the Kinect camera for its Xbox gaming console. The Kinect detects the gamer, who then controls the game with his movements. Google's Tango project and Intel's new RealSense camera are now providing mobile devices with similar capabilities. Thanks to the RealSense camera, the Dell Venue 8 7000 can generate an impression of its surroundings. The first-generation R100 saves additional spatial information for every photo taken by the tablet's camera. It has three cameras that are positioned at different locations, and take pictures at the same time. The camera in the middle captures the actual image. An algorithm searches for identical points in the two images generated by the cameras on the right and left sides. The downstream analysis function uses these identical points to execute a depth determination operation, which follows the principle of triangulation (see right). The whole procedure is quite precise for distances ranging from one metre onwards, but the precision level declines for distances ranging from five metres onwards. If desired, the Dell tablet measures the distance between two objects (see right) in its photo gallery or determines the surface area. Amateur architects and home decorators no longer need to whip out their measuring tapes – all they have to do is take a picture.

Sense of space as a grid of measuring points

This is just the beginning. The next-generation RealSense 200 will be even more precise; it determines the spatial information using a laser, which uses infrared light to construct a grid of measuring points. Two IR sensors receive this data, and an algorithm links the points into surfaces and generates a depth model of the environment, which can be combined with a photograph (see right). For example, the software might throw a grid of 78 points over a face, in order to capture its position and roughly register the person's frame of mind – angry, happy or sad. It also measures the pulse rate on the basis of changes in the colour of facial skin. In the future, mobile devices will be able to find out how their owners or the owners' conversation partners are feeling. And thanks to neural networks, they'll keep getting better at it.

However, we're not quite there yet. As in the Kinect, the RealSense IR cameras function with a low resolution of 320 x 240 or 360 x 480 pixels. The system records a video and uses it to analyse movements and gestures. If the frame rate is 60 frames per second, the system performs 18 million depth-related calculations per second. Intel recommends that the device with the RealSense camera be moved very slowly; ideally, the photographed object should be at rest. These recommendations indicate that the hardware for mobile devices is far removed from the spatial orientation capabilities (see page xx) that are, for example, necessary for autonomous driving. An additional challenge - the RealSense hardware should be small enough to fit into smartphones. One of Microsoft's research teams has already found a way to shrink the sensor device. To achieve that, the camera lens is surrounded by a circle of LEDs, which emit infrared light (see right). The infrared filter that is built into cameras is then removed, so that the light corresponding to this particular wavelength can be captured. The Depth4Free system can recognise gestures in its vicinity; however, it cannot be used to measure spaces.

Google's Tango project can do this however, and the corresponding item is expected to find its way into consumer devices at the end of the year. The spatial detection system will initially equip NASA's SPHERES robots. These football-sized spheres will swim through the international

Two cameras for distance measurement

Triangulation is the most common method of determining the distance to an object. The magnitude of the angle – from the point of view of the two sensors – determines the distance.
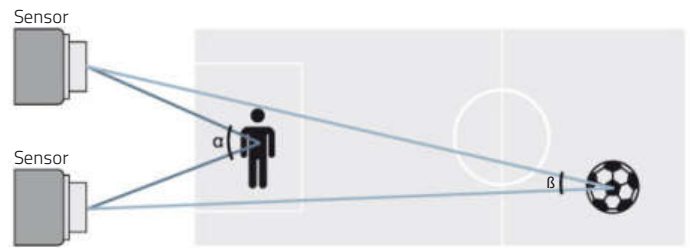
A tablet measures space

Intel's first-generation (R100) RealSense camera is used in the Dell Venue 8 7000 tablet. It uses the aforementioned principle, and can calculate the distances between objects at close range.

Depth information with the infrared laser

RealSense R200, Intel's new camera for tablets and mobile phones, uses infrared lasers and sensors. The image processor uses these to gather spatial information, which is used by a software application to generate a depth image.

IR Sensor | Colour sensor | IR laser projector | IR Sensor | Image processor
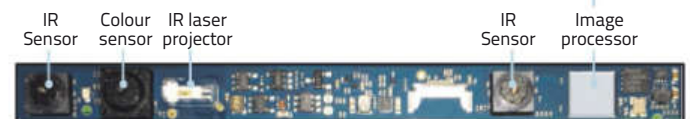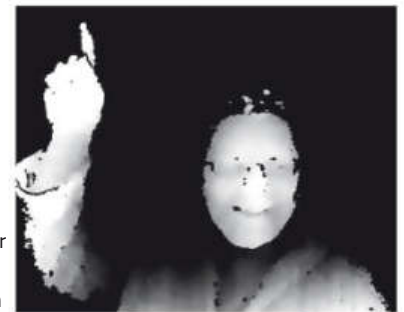
Recognising gestures with LED lamps

Researchers at Microsoft have simplified close-range spatial detection: LED lamps surrounding a photographic lens emit infrared light, which is captured by the camera and evaluated by software.

space station and measure its internal spaces.

As of now, there is only one Tango tablet that is equipped with a sensor device similar to the devices found in the RealSense or the Kinect. Furthermore, a motion-tracking system uses infrared measurements to ensure that the prototype records its own position. When you move the tablet through your home, Tango records the route and simultaneously measures the space. If you then retrace your steps, Tango runs a data synchronisation operation and finds out that it has already been in the area – pretty soon, it will become quite well-versed with its surroundings.

But why go to all that trouble? Well, in a few years, autonomous cars will be zipping across our roads with the help of computer control systems. They will need a multi-level sensor device, in order to be able to find their bearings in their ever-changing environment. Distance calculations that make use of a stereo camera are sufficient for close ranges involving distances of up to 30 metres (see upper right) – They can identify lanes and traffic lights. However, they can only capture a small angle lying in the range of 50 to 60 degrees. Autonomous cars can generate a complete 360-degree view of their surroundings through a LiDAR system. Such a system emits laser pulses and measures the length of time it takes for them to be reflected back to the point of origin. This works quite reliably up to a distance of a few hundred metres. However, this isn't quite enough for autonomous driving; the on-board computer must synchronise the data with a detailed 3D map of the surroundings, and it needs additional information regarding the locations of footpaths and traffic signs in order to be able to calculate its own route. Furthermore, the computer must identify objects such as people, bicyclists or animals, in order to calculate their trajectories. This is done by neural networks.

Neural networks improve by themselves

Neural networks look for answers to questions like, 'When is a horse really a horse?' To answer that, the networks are fed with an enormous number of images of horses, on the basis of which they learn to filter out the distinctive characteristics of a horse, such as the mane, tail, nose, legs or hooves. If the developers train their networks to an intense degree, they would, in principle, be able to detect the 'horse' that could be a potential danger to traffic as reliably as we could. The most important breakthroughs related to the identification of objects have been attained by researchers through the use of convolutional neural networks (CNN) (see bottom right). The central 'convolution' computational operation sets a filter via a quadrant of pixels. The convolution filter compares the pixels in the middle of the quadrant to the pixels at the edges and looks at how similar the surroundings are.

Everyone has already used a convolution filter. An image processing application like Gimp uses such filters to soften or sharpen photographs. This operation is repeated several times by CNNs, whereby they keep diverging from the actual image contents and attain a higher abstraction level with each successive filtering process. The pixels become features like lines, curves and edges, which in turn give rise to eyes, noses and legs. The goal of the filter is to carve out these properties as clearly as possible. Towards this end, the CNN lets dozens or even thousands of filters run in parallel, and it finds out which ones work best for a certain type of object. At the end of the filtration process, the neural network works with ever-coarser structures, until it finally makes a decision in the last phase - Yes, it obviously is a horse.

The leading CNN experts work at universities like Stanford, but they usually end up working for large service providers like Google, Facebook and Microsoft, which use CNNs to comb through and catalogue their

Driving a car with a 3D view

In autonomous cars, a stereo camera measures the distance between the vehicle and obstacles that are located at close range (i.e. up to 30 metres). A measurement system like the one in this case – which was developed by Texas Instruments1) – then calculates the exact distances.
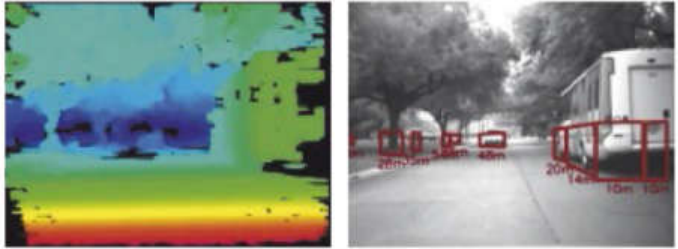
1) The full video can be found with Embedded Vision, at http://bit.ly/1B4oXJQ

Using laser measurements to detect road traffic

The car uses LiDAR measurements to capture the surrounding environment in a 360-degree view. Towards that end, it finds out how long it takes for the emitted laser pulse to be reflected back to the LiDAR.

Neural networks identify objects

The network initiates ten parallel processes in multiple self-repeating steps, in order to identify an object. It works its way forward from the details (lines, points) to coarser and larger structures (legs, head), until it recognises the horse.
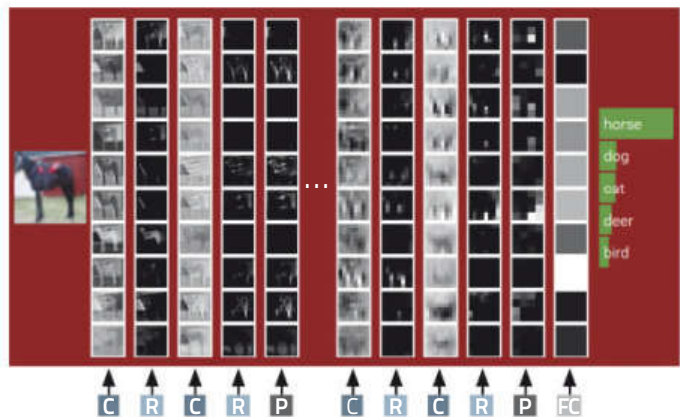
C **Convolution Layer:** A photo filter highlights the surroundings of a pixel and makes typical characteristics visible.

R **ReLu Layer:** ectified linear units activate the important sectors (bright spots in the R-layer) on the basis of a threshold value.

P **Pooling Layer:** The resolution is reduced to intensify the important sections. The result leads to the initiation of the next cycle.

FC **Fully Connected Layer:** Finally, the result is compared with the results of the other processes, and then a decision is made.

gigantic collections of images. In February, researchers at Stanford University and Yahoo Labs announced a breakthrough in face recognition.

Their CNN identifies faces from any angle, even if they are partially covered. To make this possible, they fed their CNN with 200,000 images containing faces, along with 20 million photos that did not contain any faces (as a cross-check). Before the training programme ended, the CNN ran 50,000 procedures to process batches of 128 images. Facebook even announced that its DeepFace network recognises faces correctly in 97.25 percent of all cases, which means that it's just a few percentage points below the human average.

However, one should put these success stories into perspective. 'Even neural networks have difficulties when they have to identify individual objects within a complex image", explains Dr Mark Asbach, who did a doctorate on face recognition and was a project manager at the Fraunhofer Institute. He is currently working on the Pixolus project, which uses object detection capabilities in an app. If an object is only present in a small section, the neural network occasionally has to evaluate millions of sections per image. 'This leads to an explosion in the number of possible incorrect decisions", says Dr Asbach.

At the same time, CNNs can generate good results quite quickly if they are trained for a specific purpose, and if the number of important parameters is limited. Researchers at the Rutgers University in New Jersey have built a neural network that identifies painters and their painting styles. The network could correctly identify the artist who created the painting in 60 percent of the cases, and it managed to pin down the painting style in about half of all cases. At the end of April, Microsoft put a neural network online at how-old.net, which tries to estimate people's ages (see right). Unfortunately, the results still leave a lot to be desired. In order to make the system work, Microsoft had to install a feedback function, because neural networks get better with practice.

Special chips for smartphones are on the way

In the future, CNNs will not remain limited to the large web services. After the intensive training programme has been completed, a CNN can run on any computer: The recognition function will form a part of programming languages such as Wolfram Alpha (see right). Software developers can integrate such modules into their programmes without having to understand the subject matter. In the future, Qualcomm, the market leader in mobile processors, will even offer special hardware modules for its Snapdragon chips, which will be geared towards the heavily-parallelised computational operations of CNNs. In the coming years, they may become as natural a component of new smartphone models as modern signal chips for audio or video conversion.

The development that is leading to ever-better CNNs is proceeding in a dramatic fashion – just a few years ago, they were not yet the favoured type of neural network, and they now represent nothing less than the flagship product. Mark Asbach fears that in the future, only the large web service providers will be able to construct better neural networks for new purposes, while individual researchers will no longer be able to afford it. The number of specimen images necessary for the training phase is on the rise. According to him, the next step will involve neural networks that really are self-learning: 'In a few years, today's CNNs could be replaced by a new method that does not require a human expert who has to find training examples. However, concrete examples for such unsupervised learning are not currently on the horizon." Consequently, there is currently no conclusive answer to the question of when computers will be able to see as well as a six-year old child who has learned everything there is to learn about seeing. ◘

App with neural network

Object recognition programmes can also run on smartphones. The free Pixolus app recognises meter readings using a photo, evaluates them and depicts the usage over a long time period.
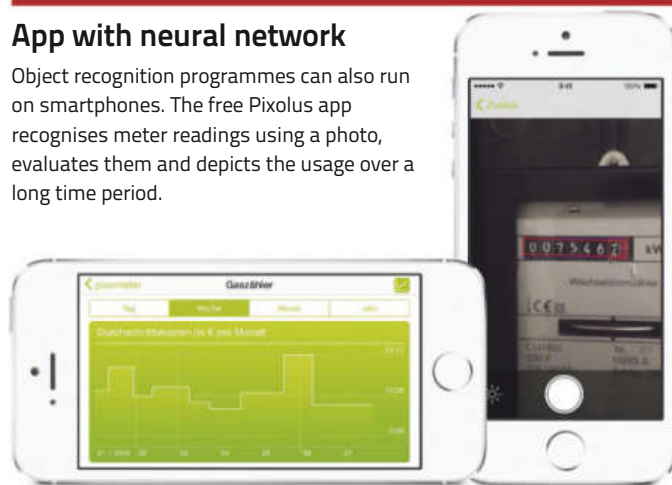
Wolfram: A computer language learns to see

Neural networks and their image analyses are integrated into special programming languages. For example, the Wolfram language allows the user to load an image behind a command, and then generates the result.
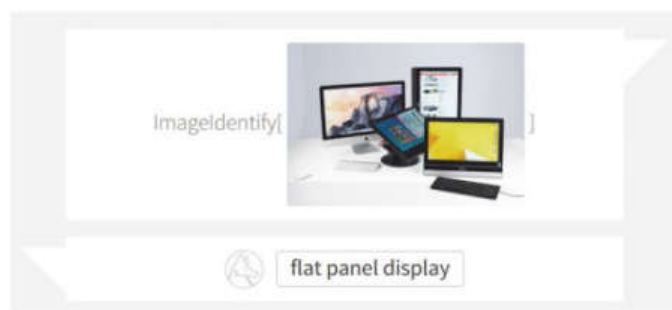
I'll tell you how old you are

Microsoft has set up an online neural network that estimates people's ages. However, when we tried it out, the network was off by a few years.

The odd errors of neural networks

A team of researchers from various American universities has shown that even well-trained neural networks keep making dumb mistakes that are incomprehensible to humans.

King penguin Starfish Baseball Electric guitar

Truck Remote control Peacock Grey parrot

1987
Amiga 2000
The Amiga 500 is the home computer, the A2000 the office machine. Commodore thus served both target groups

1983 1984 1985 1986 1987 1988 1989

Amiga 500
Sales launch: 1987
End of production: 1991
Working memory: 512-KByte RAM
Processor: Motorola 68000 @ 7 MHz
Price (in Germany): 1200 DM

One-Hit Wonder
None of Commodore's subsequent Amigas could live up to the success of the 500

CHIP TIMELINE
Amiga 500 – The Legendary Gaming Computer

Amiga is going to turn 30 soon. Its spectacular success in the 80s was followed by a fall from tall heights, although it is still considered to be one of the pioneers of computer gaming

There is hardly any device out there right now that shaped the world of computers the way Amiga did. Even today, gamers rave about the groundbreaking games and the graphical quality of the Commodore computer. However, the Amiga's run was quite brief: Fatally flawed managerial decisions led to poor sales figures for the successors of the Amiga 500. Even the gaming industry turned away in frustration. What exactly happened?

Commodore launched the Amiga 1000 in 1985. The company had acquired the crisis-stricken company Amiga Inc. for a sum of 27.1 million US dollars the year before. It was a high-performance machine, and did many things a lot better than the competition: It introduced the process of multi-tasking, unburdened the CPU through direct memory access for graphics and sound chips, and featured a spectacular sound playback facility and coloured graphics. However, it was too expensive for a home computer, and is of limited use as an office machine. Its shortcomings – such as the low resolution and the stuttering interlaced mode – prevented it from moving

C= Commodore

1990
AmigaOS 2.0
The 2.0 operating system introduces innovations that continue to partially shape the market

1994
The end of Commodore
Commodore is liquidated. The Amiga brand changes hands many times, but all attempts at a comeback fail

2015
Emulators
Today, you can indulge your nostalgia for Amiga on a PC, with emulators like WinUAE. Downloads are available at chip.de

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

1992
Amiga 4000 & 1200
The pro-computers feature 32-bit CPUs and innovative functions. The A1200 is the much cheaper variant

2012
Amiga Mini
The Linux computer with Sandy Bridge i7, a 16-GByte RAM and GeForce GT 431 is the Amiga's last sign of life

into the business world.

The Amiga became a hit two years later, when Commodore presented the Amiga 500 model: Designed purely as a home computer, it was significantly less expensive. The 500 became the highest-selling Amiga machine of all time. It attained cult status almost immediately in the minds of its countless fans, thanks in part to the wonderful games: Games like Defender of the Crown, Speedball 2 and Turrican II were milestones. More than 3000 games were released for the Amiga. However, the trend began to change at the

beginning of the 90s: Since it was so easy to copy the games, the business of exchanging games in the schoolyard flourished like never before. It stopped making sense to develop material for the Amiga.

Ever since then however, Commodore could not replicate the success of the Amiga 500. Its direct successors – the 500 Plus and the 600 – featured no technological improvements that would have justified the upgrade. This may have turned out to be one of Commodore's most serious mistakes. Although the office machines (Amiga 1200

through 4000) scored with innovative features that should have had a lasting influence on the market, they couldn't stand up to the strong competitors in the world of PCs.

In the end, it was Commodore's mismanagement that sealed Amiga's fate. After the company died in the year 1994, the Amiga rights changed hands several times. However, the cult computer never managed to make a real comeback. C

Motherboard

From the lowly entry-level models, to the ultimate gaming behemoth, there is a choice for everyone, which is why it is not surprising that ASUS motherboards are best sellers around the world - over 500 million units shipped since 1989. The upcoming 6th Generation Intel processor signals a shift in motherboard design as new technology and components are taken into consideration for motherboard designs. Even for entry level gaming, ASUS Motherboards give users a wealth of features that will turn any gaming experience on its heels. New technologies such as USB 3.1, DDR4 RAM, SupremeFX audio and even 5-way Optimization for instant performance boost makes gaming with ASUS a great experience.

Graphics Card

ASUS is an expert in creating the graphics card, with years of experience behind them. New to ASUS is the Auto Extreme Technology, where a fully automated production technique ensures better graphics card production as well as injury-free handling of the card, thanks to the lack of solder points. The company's latest cooling system, the DirectCU III houses three fans that effectively dissipates the heat away from the heatsinks, and does not turn on until the GPU hits a certain temperature threshold. Not only that, thes brand new Super Alloy Power II components are also utilised to enhance efficiency, reduce power loss and achieve thermal levels that are lower than previous designs.

ASUS - Th Brand F Gaming

No other company can provide you with a
– only ASUS can By Sharil Abdul Rahman

f you are into building your own gaming rig, you know how frustrating trying to get the perfect line in Tetris – it takes multiple tries, and should work, doesn't. However, there is one company that can rig – and that company is ASUS.

Baring the processor, RAM and storage, ASUS has just about every ever own, and then some.

e Leading
or Total
Solution

total A-Z solution in DIY gaming rig building

it can be most of the time. Trying to piece together the pieces is like
sometimes you get gaps here and there where the parts you think
provide you a total A-Z solution when you want to build your gaming

piece of component you need to create the best gaming rig you will

Networking
Winner of the CES 2014 Innovation Award, ASUS has carved out a good chuck of the market with their innovative networking products, with great emphasis in achieving the best online gaming experience for the customer. Technologies such as 802.11AC is the cutting edge in networking protocols and AI Protection, powered by Trend Micro, gives ASUS a leg's up in delivering the best networking performance for its customers - wired or wireless.

Monitors
ASUS is now making big waves in the monitor market, with a full range of gaming monitor solution on offer. Technologies such as Free Sync and G-Sync are now in use in ASUS monitors to provide flicker and tear-free gaming experience, important for games such as first-person shooters, multiplayer shooters and such, which requires fast movements on screen. ASUS monitors are also TUV certified, and feature ultra-low blue light emission levels - up to 70% in certain models for the best eye protection around.

Peripherals
To gamers, the keyboard and mouse is like an extension of themselves in the gaming world. This is why it is important to have the best peripheral you can get for your gaming expeditions. ASUS is no stranger in creating gaming-centric peripherals, and their ROG and STRIX line of products delivers the best gaming experience right under your fingers. Mechanical keyboards, gamer-tuned mouse and even headphones supporting multi-channel surround sound is part of ASUS' offerings for gaming peripherals, which makes the gaming experience a complete one
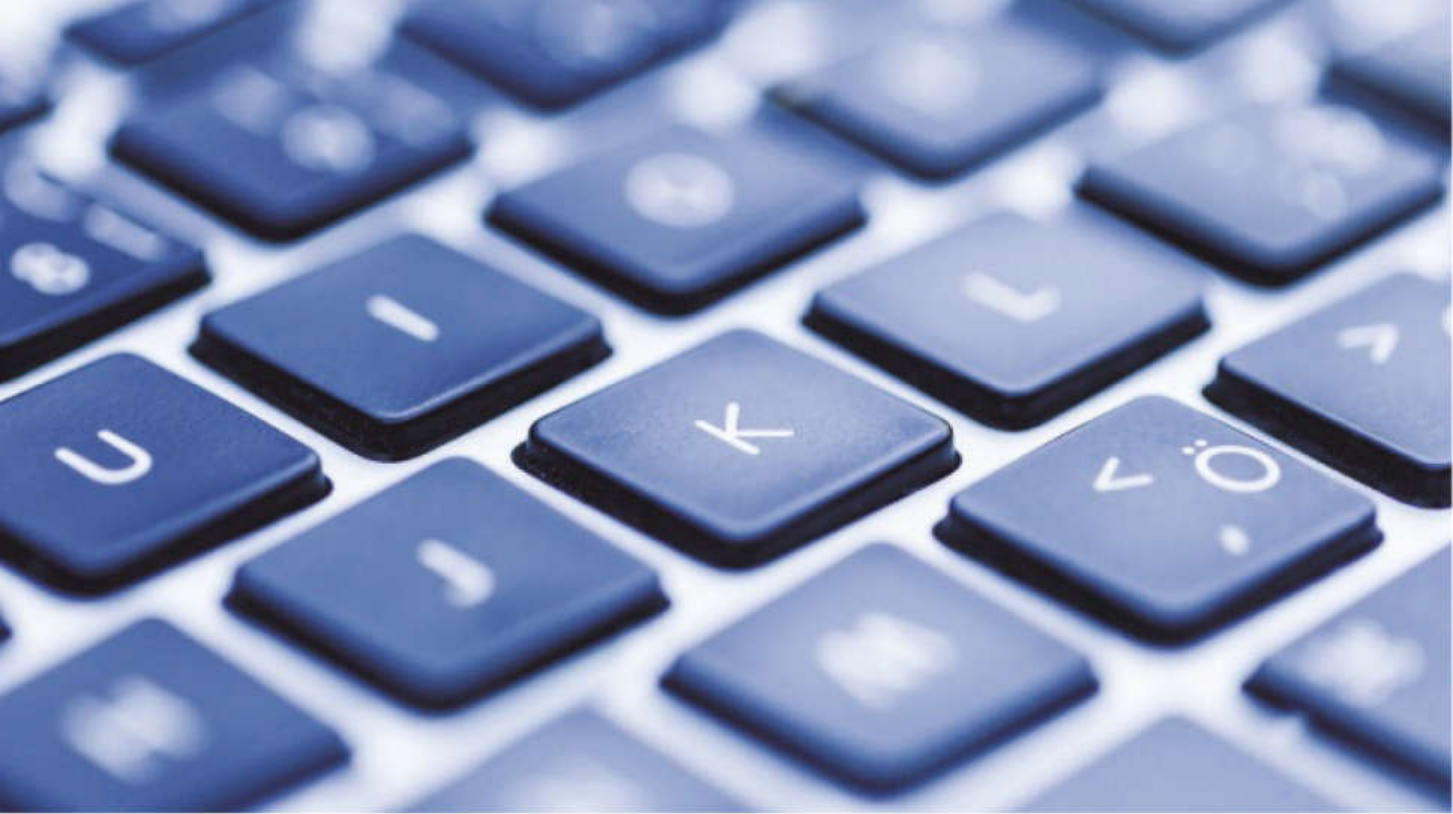
Shortcuts

Why go though cumbersome menus when using shortcuts can make your work quicker and easier? Here are some shortcuts that everyone should know By Caren Stella Geiger

Windows

[CTRL]+[C]	Copy selection
[CTRL]+[X]	Cut selection
[CTRL]+[V] or Shift [ALT]+[Insert]	Paste selection
[CTRL]+[Z]	Undo last action
[CTRL]+[Y]	Undo last [CTRL]+Z
[CTRL]+[A]	Select all elements
[DEL] or [CTRL]+[D]	Delete element
[F2]	Rename element
[ALT]+[Tab]	Toggle between running programs
[ALT]+[F4]	Close element or program
[F5] or [CTRL]+[R]	Refresh active window

Photoshop (CC)

[CTRL]+[N]	New file
[CTRL]+[O]	Open
[CTRL]+[A]	Select all
[ALT]+[CTRL]+[Z]	Undo action
Shift [ALT]+[CTRL]+[N]	New layer
[CTRL]+[E]	Reduce to one layer
[CTRL]+[T]	Free transform
[CTRL]+[L]	Levels
[CTRL]+[U]	Hue/ Saturation
[CTRL]+[I]	Invert
[ALT]+[CTRL]+[I]	Edit image size

Mac

[CMD]+[C]	Copy selection
[CMD]+[X]	Cut selection
[CMD]+[V]	Paste selection
[CMD]+[Z]	Undo last action
[CMD]+[A]	Select all objects
[CMD]+[SHIFT]+[4]	Screenshot
[ALT]+[CMD]+[Q]	Logout
[ALT]+[CMD]+[Eject]	Idle state
[CMD+[Backspace]	Delete file
[ALT]+[CMD]+[W]	Close all windows in program
[FN+[Backspace]	Delete text input

Office

[CTRL]+[O]	Open document
[CTRL]+[W]	Close active document
[CTRL]+[Z]	Undo last action
[CTRL]+[Y]	Undo last [CTRL]+Z
[CTRL]+[SHIFT]+[F]	Bold
[CTRL]+[SHIFT]+[K]	Italic
[CTRL]+[SHIFT]+[U]	Underline
[CTRL]+[Space]	Undo formatting
[CTRL]+[ALT]+[V]	Paste content
[CTRL]+[ALT]+[L]	Switch to Print Layout view
[F12]	Save as

Skylake is Here

The next generation of Intel processor has landed, and we have the scoop on what makes it tick   *By Sharil Abdul Rahman*

Since the original 8008 processor, created way back in the early 70s, Intel has been pushing boundaries and envelopes in achieving the best performance they can get out of a piece of silicone. Powering devices such as mainframes, servers, and even the Space Shuttle – Intel's expertise in creating microprocessors is unparalleled. Their 6th generation of the Core processor, previously codenamed Skylake, is another testament to their ability and know-how in the segement.

Tick Tock Goes the Clock

A successor to the Broadwell family of microprocessor, the new generation features improvements and features that was first introduced in the line a couple of generations ago. Skylake is a microarchitecture redesign using an already existing process technology, serving as a "tock" in the Intel's "tick-tock" manufacturing and design model. This includes the usage of the 14 nanometre manufacturing process, first introduced with Broadwell.

Skylake is the first to have its fully integrated voltage regulator (FIVR) removed, as well as the integration of the Platform Controller Hub (PCH) onto the die for some of the models in the line-up. This in essentially making Skylake processors following System on a Chip (SoC) building characteristics.

Several models will be part of the new Core processor, with models suffixed with S, H, U, Y and the unlocked K model heading the family range.

Features Galore

New features that will be introduced with Skylake processors includes the formal support of DDR4 throughout the range. There will be partner boards that will have support for both DDR3 and DDR4, but the latter will be the mainstay memory solution for the Skylake platform. On top of the two RAM solution, support for a new SO-DIMM type memory called UniDIMM is also introduced, which supports both types of memory on the same memory slot (see sidebar for info)

Other new features include Thunderbolt 3.0, SATA Express, Iris Pro graphics, HDMI 2.0 (only supported on motherboards equipped with Intel's Alpine Ridge Thunderbolt controller), Rezence wireless charging support for upcoming Skylake laptops and up to five monitors support, when connected via HDMI 1.4, DisplayPort 1.2 or Embedded DisplayPort (eDP) interfaces. Skylake also drops the support for the traditional VGA connector for video.

Early to the Chase

Unlike previous releases, the timeframe between Broadwell and Skylake processors to the market is unusually short, as the former suffers launch delays. While the company have acknowledge the difficulties of transitioning from a 22nm production method to the smaller 14nm production method, they expect to ramp up production for Skylake post haste. Intel may seek to recover from these delays by bringing forward Skylake's release and shortening Broadwell's release cycle instead.

Expect the processors to appear on store shelves around the world by end Q3 or early Q4 of 2015, with the new Skylake-equipped laptops to appear in market by year's end.
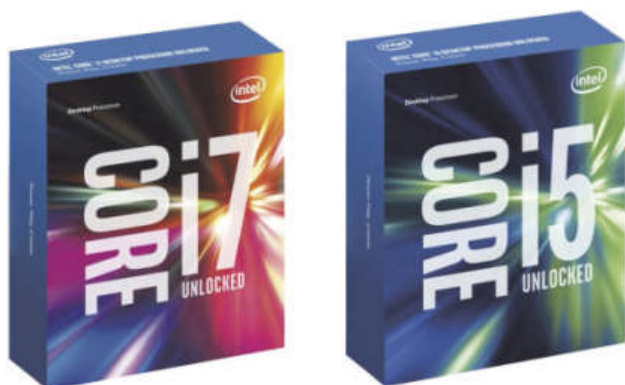
INFO

What is FIVR?

FIVR stands for Fully Integrated Voltage Regulator, which provides a microprocessor the appropriate voltage for it to function normally. It works by converting incoming power – usually +5 volt or +12 volt, into a lower voltage so that the microprocessor does not burn out.

Modern CPUs includes FIVR on package or on die. This allows the microprocessor design to be simplified as well as help in reducing CPU power dissipation.
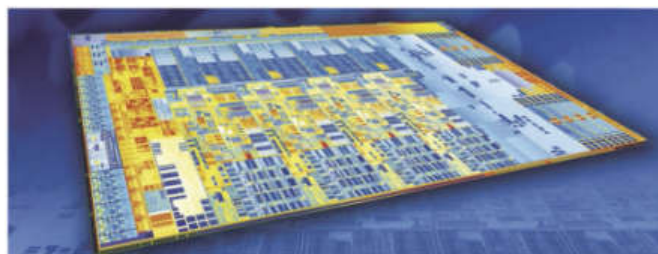
UniDIMM – a new kind of RAM

Instead of choose between DDR3 and DDR4 for your machine, next time you may just can use both at the same time. UniDIMM, short for Universal DIMM, is a specification for dual in-line memory modules (DIMMs), which are printed circuit boards (PCBs) designed to carry dynamic random-access memory (DRAM) chips. Thanks to the lack of additional memory chip, UniDIMM can be populated with either DDR3 or DDR4 on the same PCB.

UniDIMM will have the same footprint and pin number as the current DDR4 SO-DIMMs, i.e. laptop memory size, but it will have the notch in a different location so that it is not compatible with standard DDR3 & DDR4 SO-DIMM sockets. As DDR4 and DDR3 each has different operating voltages (1.2 volts vs 1.5 volts (1.35 volts for low-voltage DDR3L)), UniDIMM will have additional built-in voltage regulation circuitry.

Rezence

Developed by the Alliance for Wireless Power (A4WP), Rezence is an interface standard for wireless electrical power transfer, i.e. charging, designed around the principle of magnetic resonance. The Rezence system is supported by many major companies, including Intel, Broadcom, Qualcomm, Samsung Electronics and many others.

What makes Rezence different than other wireless charging protocols is the ability to charge devices even through matter. While other protocols dictates a certain way for devices needed to be placed on the charging pad, Rezence allows users to both place it anyway they want, as well as using cases, as the protocol allows the device to work with distanced of up to 5 centimetres between the transmission pad and the device. The protocol allows power transfers of up to 50 watts, and up to eight devices at any one time. This allows Rezence to be used for applications such as charging a fleet of smartphones, or charging an Ultrabook – all using a single wireless connection.

Breakdown of Skylake
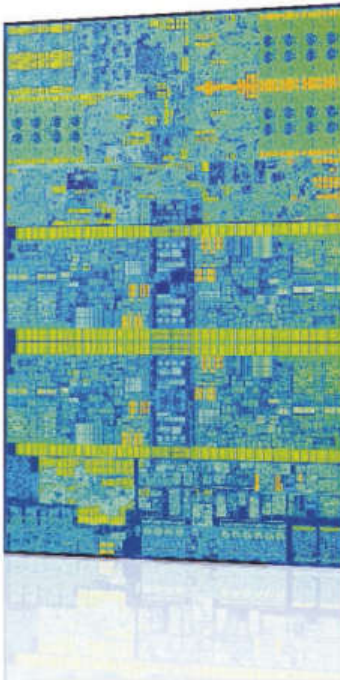
14 nanometre manufacturing

This is Intel's second processor using the new manufacturing process. The manufacturing process allows more transistors to be included in the same die size, without compromising on performance –both processing power and thermal envelope.

This manufacturing process yields transistors that are about 10,000 times smaller than the original transistors found in the Intel 4004 chip, back in 1971.

Low power consumption

Intel claims to achieve lower Thermal Design Power (TDP) with the new Skylake processor when compared with previous generation products. Sources online has shared that the TDP for the new processors will range from 95 watts for the top of the line model, all the way down to 4.5 watts for what is presumably the mobile chip version.

There are also reports that some selected desktop models will have variable TDP envelopes, with the power consumption going from 35 watts all the way to 95 watts when at full load. We will explore this once we have the processor in hand in our labs.

Thunderbolt 3

The new 6th Generation Core chips also will support several new connectivity options, right off the bat. It will support Thunderbolt 3.0, when used together with Intel's Alpine Ridge controller chip. As with previous models, Thunderbolt 3 will support display, data and power using a single cable.

This time around however, Thunderbolt 3 will support up to two 4K displays or a single 5K display on a single connector. It also can provide up to 100 watts of power per cable, thus eliminating the power cord for some devices. Plus, it will be using the new USB type-C connectors.
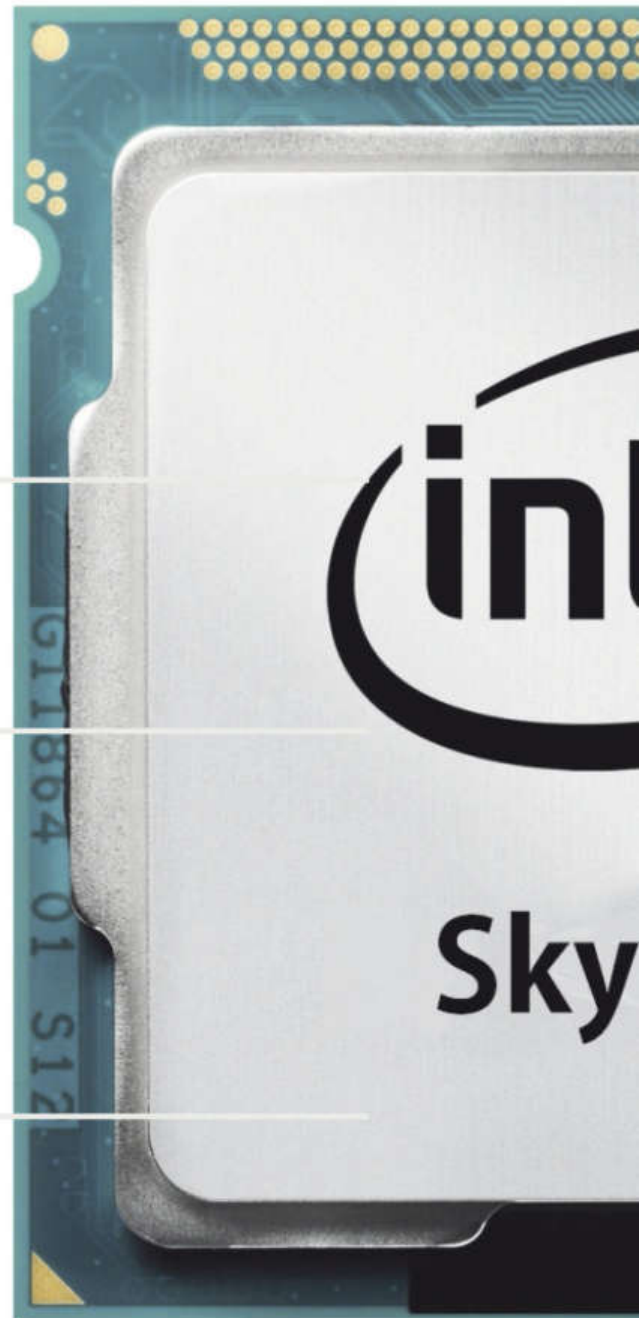
With the new introduction of the 6th Generation Core processor, Intel is introducing the world to the wonders of the 14 nanometre manufacturing process, and what it can do in terms of fitting features into the processor. Previously code-named Skylake, the new processor brings together a list of features that will turn heads in the world of computing for the masses
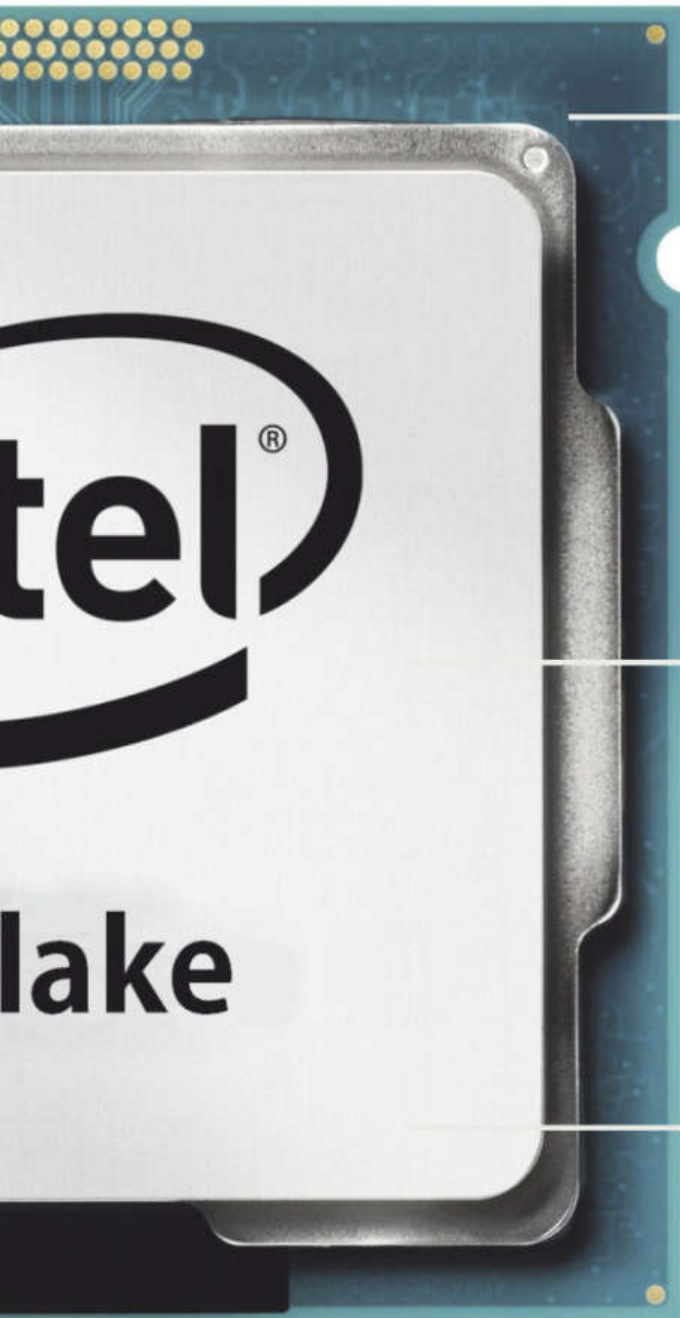
New socket

Socket LGA 1151 is introduced with the 6th Generation Core processor. This new socket is unfortunately not backward compatible with the previous generation. With 1151 pins, it is one more than the one that is in use by Haswell and Broadwell.
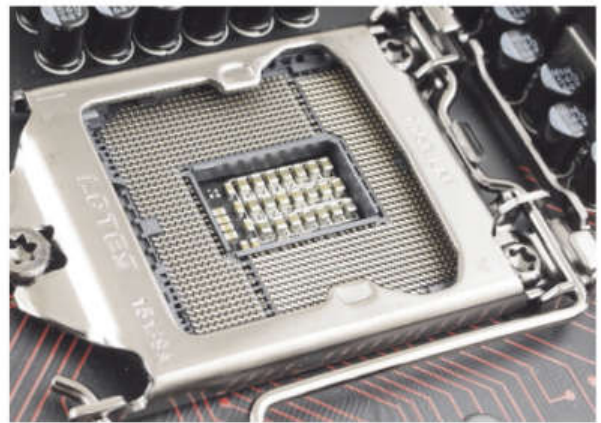
Full HEVC acceleration support

High Efficiency Video Coding or HEVC is a new video compression standard, which is the successor to the Advanced Video Coding, also known as H.264. HEVC is said to double the data compression ratio when compared with H.264, when done at the same video quality. It can support up to 8K UHD video, with resolutions up to 8192 x 4320.

The Intel Skylake processor will have support of HEVC, so video acceleration of HEVC encoded videos will be done on a hardware level rather than a software solution.

Full BCLK toverclocking support

A first in Intel processor, the Skylake processor now allows a full range of Base Clock (BCLK) overclocking, to a tune of 1MHz increments, rather than the stepping tuning of 100/125/166MHz increments introduced in Haswell. This allows a finer control of control while overclocking Skylake processors with supported motherboards.

The Skylake processors also supports DDR4 overclocking with override capabilities of up to 4133 MT/s and DDR steps tuning in 100/133 MHz compared to 200/266 MHz with finer grain increments.

Intel Partners onboard with 100 series

Without partners, Intel will not be able to push the new generation processors out to the market, and in Malaysia, the big names for motherboards are roaring to go to have their worth met, with the new 100 series motherboard.

CHIP managed to secure the boards from ASRock, ASUS, GIGABYTE and MSI each running on the new 100 series chipset to go with the new 6th Generation Intel processor. Check out the reviews in our Test Lab, and see which one is the one for you.

ASUS MAXIMUS VIII Hero

Designed to be perfectly balanced for gaming, the MAXIMUS VIII Hero combines great features and the new Z170 chipset for Intel's 6th Generation Core processor.

MSI Z170A Gaming M7

Mastering the game is what MSI, is all about, and their Gaming M7 is ready to prove its worth. With a specs list that is comparable, if not better than the rest, it is ready to guide you to the next level of gaming.

GIGABYTE Z170X G1 Gaming

Born to game. That is what GIGABYTE is saying with their G1 Gaming motherboard. Bringing together features that some can only dream of, it is ready for Intel Skylake, and your gaming adventures.

ASROCK Z170 Extreme7+

Stable and reliable is the game with ASRock's Z170 Extreme7+ motherboard. Whatever you want or need in a motherboard, most likely the ASRock will be able to fulfil your needs.

TEST LAB: The Tools

Here at the CHIP Test Labs, we adhere to the high requirements set by the CHIP International Testcenter standards. This means that everything here -- from our own personal knowledge and to our trusted tools of the trade -- are meant to provide the most optimised, unbiased and comprehensive review to every product that comes through our doors. As thus, our test bed tools are specifically picked to get the most out of every test we perform

Intel Platform

Motherboards
Intel DZ77GA-70K
MSI Z87 MPower

Processors
Intel Core i7-3770K
Intel Core i7-4770K

Graphics Processing Unit
MSI GeForce GTX 980
GAMING 4G

CPU Cooler
Master X6

AMD Platform

Motherboards
ASUS Crosshair V
ASUS A88X-Pro

Processors
AMD FX-8150
AMD A8-3850

Graphics Processing Unit
ASUS Radeon R9 290X

CPU Cooler
Cooler Master Hyper 212
EVO

PSU, Storage & RAM

Power Supply
Cooler Master Silent Pro
Hybrid (1300W)

Storage
Western Digital Black² Dual
Drive
Western Digital My Book
Live Duo

Memory
Kingston HyperX
KHX1600C9D3K4/16GX
Kingston HyperX FURY
HX318C10FWK2/8
Kingston HyperX Predator
HX430C15PBK4/16

Benchmark Software

Operating System
Windows 7 Ultimate
(64-bit)

Futuremark
PCMark 8
3DMark

Industry Standard Benchmark Tools
AIDA64
SiSoftware SANDRA
Speccy
Unigine Heaven

TEST LAB

CONTENTS

CHIP Awards

CHIP Editors' Choice Award
Awarded to products that receive unanimous endorsement from all CHIP editors for its overall brilliance

CHIP Outstanding Award
Reserved for products that combine astute technical performance with good quality and design

CHIP Recommended Award
Given to products that possess singular quality worthy of a recommendation

Ratings

Each product review is rated on a scale of 1 to 5 for different key parameters:

PERFORMANCE : Refers to the efficiency of execution
FEATURES : Rates the abilities and unique characteristics available
DESIGN : Varies according to product. Finished products - form factor and build quality. Hardware components - layout, size and cooling solution. Software - user interface
VALUE : Calculated from the performance and features of the product in relation to the price

The Technologica Crux

August has been a relatively quiet month, as far as announcements go, with the exception being Samsung announcing two brand new phones in the form of the Samsung Galaxy Note 5 and the Galaxy S6 Edge+, which by the time you're reading this, is likely to have been launched in Malaysia as well. That's four flagship smartphones in a year, something probably only the Korean tech giants are seemingly capable of.

We've been pretty busy on our side as well, as Intel's new Skylake processors have just hit the market, and we were lucky enough to have received a number of motherboards from ASUS, ASRock, GIGABYTE and MSI to review. It's a bit difficult to pick a favourite because all of them hold their own very well, and have their own selling points that make them a compelling purchase for enthusiasts, and those looking to upgrade from older platforms.

We were also lucky enough to receive both an R9 390X and R9 Fury to play around for a bit, although the R9 Fury X continues to elude us still. There are more stuff to look forward to in our Test Lab section this month of course, but you'll have to turn the pages to find out more !

Rough It Out

There are times where you need to go to the rough and tumble area – especially if you are an engineer out in the field. Your typical desk-jockey laptop will not cut it out in the wilderness. That is when you reach for the Dell Latitude 12 Rugged Extreme flip-hinge convertible notebook. Powered by Intel's Core M processor, it can last up to 12 hours in a single charge, while still withstand rough tumbling and fall one may encounter, which includes IP-65 rating to protect against water and dust intrusion.

Dell Latitude 12 Rugged Extreme
Contact: Dell Asia Pacific Sdn Bhd
Phone: 1 800 88 0301, 1 800 88 2888
Info: www.dell.com.my

Print Forever

Continuous ink supply system is still a niche market for printer companies, but it doesn't stop Epson to come out with their third generation of printers using this technology. The Epson L565 is an all-in-one that gives you the flexibility of a larger printer, but with a continuous ink supply feeding the micro-piezo printhead. With a bottle of ink, you can print up to 4000 pages of text and up to 6500 pages of colour pages when used with the full CMYK spectrum. Plus, it scans, copies as well as connects wirelessly to your network for ease of access.

Epson L565
Contact: Epson Malaysia Sdn. Bhd.
Phone: (03) 5628 8288
Info: www.epson.com.my

Stylish Slim Design

Combining a slim design and powerful performance, the Samsung Galaxy A8 is the slimmest Galaxy device to date. The 5.7" Full HD Super AMOLED display and just 2.5mm super narrow bezel provide a more immersive viewing experience and maximum screen space. At the same time, it still provides a long lasting usage with high capacity 3,050 mAh battery. It also shares the fingerprint scanner as its larger sibling for security purposes.

Samsung Galaxy A8
Contact: Samsung Malaysia Electronics Sdn Bhd
Phone: 1 800 88 9999
Info: www.samsung.com.my

Redesigning A Classic

Being number one is not easy, especially when you need to reinvent yourself. WD's famous external hard drive has now been redesign, and it is a redesign for the better. The My Passport Ultra and My Passport for Mac portable hard drives are now available in capacities up to 3 TB and in four stylish colors1 - Classic Black, Brilliant White, Wild Berry and Noble Blue. It features 256-bit AES hardware encryption – delivering a high level of security with no impact to write-speed or CPU activity. You can be assured that your data is safe and sound from malicious parties.

WD My Passport Ultra
Contact: Amble Action Sdn Bhd, Eternal Asia (M) Sdn Bhd
Phone: (03) 7955 1768, (03) 5613 5600
Info: www.wdc.com

Core it up !

While many other manufacturers create mini PCs with simple features, the ECS Core Mini PC trumps them all, thanks to the more advanced Intel Core M processor at its heart. With 4GBs of RAM, up to 120GB of storage, and a bevy of connectivity options – it is Windows 10 certified, and features a built-in microphone – so you can call up Cortana hands free.

ECS Core Mini PC
Contact: Convergent Distribution(M) Sdn. Bhd.
Phone: (03) 2144 1881
Info: www.ecs.com.tw

A Coach Around Your Neck

When you run, or in the gym – doing it without any music will be dull and boring. Jabra's Sport Coach Wireless earphones will give you the tunes to pump up your workout regimen, as well as creating your own personalised cross training exercise. Connect to your smartphone with Bluetooth, and even take calls when one comes in. It integrates with leading 3rd party fitness applications to unify your training history.

Jabra Sport Coach Wireless
Contact: Advance Digital Solutions Sdn Bhd., Ingram Micro Sdn Bhd
Phone: (03) 8076 4833, (03) 7952 8084
Info: www.jabra.com

Speedy

If you are looking for fast file transfer speeds, look no further than installing a SSD in your system. Transcend's SSD370S SATA III 6G/s SSD boasts incredibly fast transfer speeds, large capacities of up to 1TB, SATA Device Sleep Mode (DevSleep) to maximise battery life, as well as being light and thin.

Transcend SSD370S
Contact: Amble Action Sdn Bhd
Phone: (03) 7665 3939
Info: www.transcend-info.com

Clicky Gaming Keys

When you game, your keyboard becomes an extension of your appendage, reaching into the game world. Of course you want the best for your tool right? Logitech's G310 Atlas Dawn keyboard features the company's own exclusive Romer-G mechanical switches, which promises 25% faster key actuation with every press. With its compact size, it is easily transported around – especially to LAN or eSports events.

Logitech G310 Altas Dawn
Contact: Ingram Micro Sdn Bhd., MCL Sdn Bhd., M-Link Sdn Bhd., Kaira Technologies Sdn Bhd
Phone: (03) 7955 8188, (03) 8023 3800, (03) 7728 9003, (03) 7955 3669
Info: www.logitech.com/en-my

(Almost) Unlimited Storage

Snap away with your camera when you have the Kingston Class-10 UHS-I SDHC 512GB Card inside. At 512GB, it is the largest capacity SD card in the market currently, and it is also the fastest Kingston card, with 90MB/s read and 45MB/s write speeds. Designed for videographers who shoots FullHD and 4K videos, and require the space to capture all of the content, the new card is perfect for them.

Kingston Class-10 UHS-I SDHC 512GB Card
Contact: Ingram Micro Sdn Bhd., MCL Sdn Bhd., M-Link Sdn Bhd., Kaira Technologies Sdn Bhd
Phone: (03) 7955 8188, (03) 8023 3800, (03) 7728 9003, (03) 7955 3669
Info: www.logitech.com/en-my

Beef Up Your Mac's Memory!

The problem with owning a Macbook or Macbook Air is that you will eventually run out of storage, as the built-in SSD is not as cavernous as you would like. To rectify that problem, Team Group introduces the MiDRIVE. It is basically a half-sized microSD adaptor that when slotted into the SD Card reader in a Macbook Pro or Air, it will be flush with the body, making it look seamless. It supports microSD up to 128GBs.

TeamGroup MiDRIVE
Contact: M-Link System (M) Sdn. Bhd
Phone: (03) 6143 0888
Info: sales@mlink.com.my

Buzzing for 4K

ASRock's BeeBox may just hold the title as the world's smallest 4K playback machine, as it supports the high resolution video format out of the box. It also supports triple monitor configurations, dual-channel memory as well as USB 3.1 Type C. It will also come with 802.11ac wifi, Intel quad-core processor, up to 32GB of internal storage as well as support for a 2.5" SATA hard drive.

ASRock BeeBox
Contact: Cudo Technologies (M) Sdn Bhd., Ingens Sdn Bhd
Phone: (03) 2418 1177, (03) 7688 9888
Info: www.asrock.com

Wireless Speed Demon

With transfer speeds up to 3.2Gbps, the D-Link DIR-890L AC3200 packs a punch with features such as Advanced AC SmartBeam technology, SmartConnect technology, SharePor and mydlink cloud management to make Internet-driven home entertainment faster and better. Thanks to six external high-gain antennas, signal degradation and loss will be a thing of the past while moving around the house or office area.

D-Link DIR-890L AC3200
Contact: Advancenet Technology Sdn. Bhd., Ingram Micro Sdn. Bhd., SiS Distribution Sdn. Bhd.
Phone: (03) 8070 3633, (03) 7952 8188, (03) 5569 8878
Info: www.dlink.com.my

Bring Your Call Anywhere

Designed for knowledge workers in open office environments, the Jabra Evolve features industry-leading noise cancellation, supports call transfer from a Skype for Business desktop-based softphone call to a smartphone, Bluetooth connectivity for portability, and a stereo 3.5-inch jack for users to plug in their own headphones.

Jabra Evolve
Contact: Advance Digital Solutions Sdn Bhd., Ingram Micro Sdn Bhd
Phone: (03) 8076 4833, (03) 7952 8084
Info: www.jabra.com

Great Low Light Photos!

The best compact is now better. If past references are to be used as a guide, the new RX100 Mark IV is definitely a winner. Featuring a new 1.0-inch type stacked Exmor RS CMOS sensor with an attached DRAM chip, the RX100 MkIV now goes up to 16 frames per second for burst shot mode. It also supports 4K video recording, features a built-in OLED view finder, and a ZEISS Vario-Sonnar T* 24-70mm (35mm equivalent) F1.8-F2.8 lens.

Sony Cybershot RX100 Mark IV
Contact: Sony (Malaysia) Sdn Bhd
Phone: 1 300 88 1233
Info: www.sony.com.my

Lite Is Might

Combining style and impressive features is the new Oppo R7. Joining its brothers - the R7 Lite and R7 Plus, the namesake of the line-up features a five-inch screen, Qualcomm Snapdragon 615 eight-core processor, 3GB of RAM, 16GB of internal storage, 13-megapixel camera, as well as the OPPO VOOC Fast-charge system.

OPPO R7
Contact: OPPO Malaysia
Phone: 1800-88-6776
Info: www.oppo.com/my

Storage for your Blade

Targeted at network builders, the Lenovo Storage S2200 is designed to deliver enterprise class SAN offerings while loaded with proven storage innovations. It is easy to scale up according to needs, and it features redundant power, hot-swappable fans and drives, as well as the intuitive Lenovo SAN Manager at an affordable entry-level price point.

Lenovo Storage S2200
Contact: Lenovo Technologies Sdn.Bhd
Phone: 1 800 80 8575
Info: www.lenovo.com/my/en

Teeny Tiny USB

Sometimes you need a lot of data storage in a smallest footprint possible. Why? Because, and bragging rights. Sandisk has you covered on that, thanks to their Ultra Fit USB 3.0 thumb drive. At 128GB, it is currently the world's smallest high capacity thumb drive. Thanks to the fast USB 3.0 connectivity, large files can be transferred in a jiffy.

SanDisk 128GB Ultra Fit USB 3.0
Contact: Sandisk
Phone: -
Info: www.sandisk.com

Second Time is Better

Second generation of anything usually brings advancements in design and feature. No difference with the Samsung Galaxy Tab S2. Like its predecessor – it comes in two sizes, 8 and 9.7 inch, but this time they have opted the 4:3 screen ratio. It features an eight-core processor, 8-megapixel rear camera, 2048 x 1536 pixels screen, 3GB of RAM and 32GB of storage.

Samsung Galaxy Tab S2
Contact: Samsung Malaysia Electronics Sdn Bhd
Phone: 1 800 88 9999
Info: www.samsung.com.my

Cooler Master MasterCase 5

Price: RM439
Contact: Ban Leong Technologies Sdn Bhd,
Build Technology Supply Sdn Bhd
Phone: (03) 7956 6300, (03) 7955 3699
Info: www.coolermaster.com

Maximum motherboard size: ATX
Bays: Dual-slot PCIe x3, 140mm fans x 6, 3.5" bays x4
Front Panel I/O: USB 3.0 x2
Dimension: 235 x 512 x 548 mm
Weight: 10.6kg

Performance:
Features:
Design:
Value:

By Nazrin Zain

Build It However You Want

Cooler Master's latest PC case allows you to customise to your heart's content

Cooler Master showcased quite a number of products at COMPUTEX this year and one of the biggest attractions there is the company's brand new fully-customisable case in the form of the brand new Cooler Master MasterCase 5.

The MasterCase 5 is Cooler Master's first ever mid-sized modular tower case with almost limitless expandability, which allows you to configure and swap out almost every part of the case with one that suits your needs.

For the standard configuration, the MasterCase 5 features support for six 140mm fans - three in front, two on top and one at the back of the case. It is also capable of supporting up to three dual-slot, extra-long GPUs and uses a dual-chamber design that allows you to isolate and partition your PSUs and cables.

The MasterCase 5 utilises what Cooler Master calls the FreeForm Modular System, in which you are able to take out and put in drive cages, fans, filters and even the PSU partitions to build a PC that conforms to your tastes and needs.

With a few choice upgrade parts available from Cooler Master, you are able to transform the MasterCase 5 into

the MasterCase Pro 5 - which includes components like additional drive cages, extra fans, and even water-cooling reservoirs from Cooler Master, if you're looking to build a custom water-cooled computer.

The MasterCase 5 is customisable enough that it even has an upgrade kit for your front panel and as we mentioned before, if you're looking to build a water-cooled PC, there's even a top cover bracket that is able to fit a 240mm radiator, and external ventilation to boot.

For the most part, disassembling a majority of the parts on the MasterCase 5 is also a breeze as the case requires no tools to take it apart. This also means that the likelihood of you losing the screws that hold the components together is less, making it easier to keep track of parts.

As far as hardware fittings go, the MasterCase 5 is capable of fitting motherboards ranging from miniITX all the way to ATX with relative ease, and is even capable of supporting a triple graphics card setup if you so wish to do so. The front I/O panel can also be upgraded to a better model to get more than just the two USB 3.0 ports that are available on the standard design.

Part of the MasterCase 5's upgrade options include additional drive bays and a windowed side panel

Looking to build a water-cooled PC instead? Cooler Master also has you covered with a top-cover bracket that can fit a 240mm radiator

+ Modular system makes it easy to take away parts you don't need and put together the ones you need
Price

— Heavy

CHIP CONCLUDES

The Cooler Master MasterCase 5 is a PC modder's dream come true. This is the first PC case that allows its users to mix and match parts to fit a user's needs perfectly without having to compromise on anything.

ASUS STRIX GTX 980 Ti

Price: RM 3,339
Contact: Build Technology Supply Sdn Bhd.,
Servex (Malaysia) Sdn. Bhd
Phone: (03) 7955 3699, (03) 8024 6688
Info: www.asus.com/my/

GPU: NVIDIA 980Ti
Memory: 6GB GDDR5
Ports: 3x DisplayPort, 1x HDMI, 1x DIV
Slot Size: Double

3DMark
Ice Storm: 14,397 points
Ice Storm Extreme: 7,937 points
Ice Storm Unlimited: 4,450 points

Performance:
Features:
Design:
Value:

Ti for You?

By Sharil Abdul Rahman

ASUS brings their game face on with their STRIX GTX 980 Ti

If you see the CPU as the brains of the PC, and the motherboard as the nervous system – the graphics card is definitely the visual cortex of your computer. This piece of hardware takes in the information from your CPU and RAM, turns the running processes into images that you can interpret on screen. ASUS is a leader in creating graphics card that appeals to gamers alike – and their new STRIX GTX 980Ti definitely ticks the right boxes in our opinion.

Using NVIDIA's latest GPU - this STRIX card is one of the biggest we have seen, thanks to its DirectCU III cooling system. It combines both heatsink pipes cooling as well as fan cooling. This translates to upwards of 30% better cooling properties, which in turn gives better performance during load.

You get a good selection of connectivity with the card – including three DisplayPorts, HDMI as well as DVI. The card supports G-Sync, when used with monitors that includes G-Sync functionality. It is also 3D ready, thanks to NVIDIA GameWorks VR. Rounding up the specs table is 6GB of GDDR5 video memory.

Like all STRIX cards, the STRIX GTX 980Ti features the company's STRIX air cooler, which will only run depending on the current temperature of the GPU. This means that you get a quitter machine at idle, and even when at full load, the running fan is barely legible outside of the CPU tower.

Running games with the card is a dream. Thanks to the aforementioned 6GB of GDDR5 RAM, just about any game on the market can be played at full resolution, tweaked to the highest settings as possible. Games that is optimized for NVIDIA such as Witcher 3 looks gorgeous, especially with all the bells and whistles turned on in the game settings. Plus, the card is the current benchmark for 4K gaming, with high to ultra-high resolution gaming scenarios a reality.

This card runs a bit better than the stock GTX 980Ti that was in our labs a few months ago – in terms of clock speed and cooling. Thus, it is a must own for anyone who wants to get the best gaming experience at this point of time.

You get a complete set of connectors - multi-monitor support FTW

A heavy metal plat at the back gives it the support for the STRIX cooler

+ Great graphics performance G-Sync and VR ready

− Heavy and bulky card

CHIP CONCLUDES

The ultimate gaming card has graced our test lab, and it has left an impression – mainly a big grin on our faces.

MSI Z170A Gaming M7

Price: TBA
Contact: Media Forte (Malaysia) Sdn Bhd., JW Power Marketing Sdn Bhd., AMT PC Distributors Sdn Bhd
Phone: (03) 2287 1177, (03) 2148 1307, (03) 3344 1124
Info: my.msi.coms

Slot: LGA 1151 **CPU:** Intel Core 6th generation
RAM Slots: 4 **RAM Type:** DDR4
Connectivity: Gigabit LAN
Ports: USB 2.0 x 7/ USB 3.1 (Type A & Type C)/ DisplayPort/ HDMI
Others: M.2 slot x 2

PCMark 8
Home: 4,438 points **Creative:** 854 points **Work:** 3,492 points

Performance:
Features:
Design:

Going for Gaming

By Sharil Abdul Rahman

MSI's first release for Skylake is a very respectable entry indeed

The sixth generation is here! When we mean the sixth generation, we are talking about Intel's latest Core processor, formerly codenamed Skylake. A new processor means a new range of motherboard provided by partner companies, which includes MSI. The big manufacturer from Taiwan is well known for their gaming-centric motherboards – and what we have in the labs today is no exception. Say hello to the MSI Z170A Gaming M7.

One of the first Intel 6th generation motherboards in the market, the MSI Z170A Gaming M7 is MSI's take on what a gaming should be like for gamers. With an impressive featureset, the Gaming M7 is a motherboard to aim for.

It supports the latest Intel Core series, with the new LGA 1151 socket. This means that the motherboard is not backward compatible with any current generation processor. Also standard on the board is DDR4 RAM slots, which will be the standard RAM for the 6th generation Intel Core processor family.

A whole list of features made it to the Gaming M7. This includes Audio Boost 3, Nahimic Audio Enhancer, SteelSeries optimised platform, USB 3.1 with both Type-A

and Type-C connectors on board, Gigabit Killer LAN on board for the best online gaming experience (including optimised traffic prioritisation and low latency connections), one-second overclocking option and many more.

MSI also included on-board are six SATA 6Gb/s ports, two M.2 Sata slots, two SATAe ports, and also features MSI Steel Armor, which strengthens the PCIe slots with a metal armour surrounding each slot. For display connectivity, you get dual HDMI ports and a DisplayPort for multi-monitor setups.

Running benchmarks on the motherboard reveals several interesting items of interest. One, even at load, the motherboard and processor combo managed to register a significant temperature drop when compared with the previous generation.

As a gaming motherboard, the MSI Z170A Gaming M7 is a great example for the new Intel 6th generation platform. While the board is not MSI's top of the line product, it is specced enough that even the most prolific gamer will not feel out of place using this in their top gaming rig.

Both USB 3.1 Type A and C is on board

MSI made sure your audio experience will be a great one with Audio Boost 3

+ Future-proof features
USB 3.1 Type A & Type C on board

– None

CHIP CONCLUDES
MSI's foray into the new 100 series motherboard is off on a good start, plus you get backward compatibility with your current cooling solution as well.

Synology DS715

Price: RM 2,014
Contact: Build Technology Supply Sdn Bhd
Phone: (03) 7955 1136
Info: www.synology.com

Number of Bays: 2
Connectivity: Gigabit LAN x 2 **Ports:** USB 3.0 X 2
Others: Annapurna Labs Alpine AL-314 Quad Core 1.4 GHz processor
Dimensions: 157 X 103.5 X 232 mm **Weight:** 1.62KG (empty)

PCMark 8
Home: 4,160 points **Creative:** 3,909 points **Work:** 4,253 points
CrystalDiskMark
Read: 750MB/s **Write:** 740MB/s

Performance:
Features:
Design:
Value:

By Sharil Abdul Rahman

Expandable NAS

Synology's DS715 gives users option for future data explosion

Not only we are consuming more content day by day, we are generating a proportionately larger content base at the same time. Think about it – you have your smartphone snapping photos away, your digital camera with multi-megabyte RAW files, Full HD or even 4K video recordings – and all of this translates to the need to have a storage system that can grow with you. If you have a tower PC, it is easy – what if you are stuck on a laptop? The answer is a Network Attach Storage (NAS) system. Synology is one of the most popular NAS providers, and their latest NAS, the DS715, is perfect for your growing needs.

Like all Synology NAS, the DS715 has a distinctive design, and is unmistakably from Synology. What is changed from the other Synology products is the hard drive loading mechanism. It now uses a spring-loaded tray for the hard drive which can be accessed from the front for easy access. The tray can also be locked to reduce any accidental removal of the drive while in operations.

Inside, Synology has fitted the DS715 with an Annapurna Labs Alpine AL-314 quad core processor running at 1.4 GHz. There is also 2GB of RAM to help in the computation while accessing the OS for the DS715 – DiskStation Manager. Now in version 5.2, users can monitor CPU usage, RAM usage, storage levels, and even add on functions such as

Connectivity wise the DS715 features dual Gigabit ports and two USB 3.0 ports at the back. Sadly, there is not enough space for a port at the front of the unit, so you have to reach to the back if you want to plug in your external storage to transfer into the DS715.

If you need extra space for your NAS, the DS715 comes with a nifty feature – it can accept an expansion unit for additional storage on the fly. The expansion unit goes up to 53 terabytes of raw storage, so you will never run out of space for your data in the future. This makes the DS715 an excellent choice for any data needs.

Easily remove the 3.5" hard drive bays with a single click

Dual connections for redundancies, as well as the e-Sata port for expandability

+ Easy access to hard drive bay
Dual LAN port for Link Aggregation
Expandable storage through expansion unit

– None

CHIP CONCLUDES

This NAS is perfect for SMEs who want to start the path to network-based backup and storage. It is perfect for home users as well, as it is easy to use.

ASUS Strix R9 Fury

Price: RM2,599
Contact: Build Technology Supply Sdn Bhd,
Servex (Malaysia) Sdn Bhd
Phone: (03) 7955 3699, (03) 8024 6688
Info: www.asus.com/my

GPU: AMD R9 Fury
Memory: 4GB HBM
Ports: DisplayPort x3, HDMI x1, DVI x1
Slot Size: Double
Dimensions: 300 x 137 x40 mm

3DMark (Fire Strike): 12,324 points
3DMark (Fire Strike): 6,166 points
3DMark (Fire Strike): 3,132 points
Unigine Heaven: 2,231 points

Performance:
Features:
Design:
Value:

By Nazrin Zain

The Fury Cometh

ASUS perfects AMD's latest Fury GPU

Last month, AMD unveiled its latest line of GPUs, which included the R9 390, R9 390X as well as the Fury and Fury X cards; with the last two cards running on AMD's new Fiji XT GPUs, running HBM memory. ASUS wasted no time slapping its Direct CU III cooler to the air-cooled R9 Fury, and this time we'll be taking a look at how the card performs.

The ASUS R9 Fury X is powered by AMD's new Fuji XT processor that is also inside the water-cooled Fury X. Whilst it features a slightly lower shader count than the Fury X at 3,584. The Fury also features 4GB of HBM memory, which sadly is not overclockable.

Unlike the Fury X, manufacturers have the option to deck the Fury with their own cooling systems, and ASUS did the right thing by putting in its DirectCU III cooler onto it, improving the card's temperature and performance levels thanks to its three 10cm fans.

In order to power up the R9 Fury, two 8-pin PCIe power plugs are required, with the card itself drawing around 375W of TDP, which is a bit on the high side. At the back

are three DisplayPorts, one HDMI port and one DVI port, which can be used in tandem with AMD's Eyefinity display tech.

As its name implies, the Fury is an amazing graphics card that is superbly powerful. In our tests, it churns through 1080p gaming without so much as breaking a sweat. The DirectCU III fans don't kick in until it hits a certain temperature threshold, and in our tests, short of playing the most powerful games, such as Shadow of Mordor, Grand Theft Auto V and The Witcher 3, the card remains as silent as can be.

One main concern that users would have about the Fury is the temperature levels. Again, thanks to the DirectCU III cooler, the Fury ran not only markedly cooler, but silent as well, even when the fans are running at full whack.

Whilst performance is absolutely excellent, one downside to the card, and every Fury and Fury X card is that the HBM memory cannot be overclocked. Eventually we may be able to do this on future cards, but for the moment, we're stuck with the 500MHz memory.

The ASUS STRIX GPU Fortifier, coupled with the reinforcement frame ensures that the GPU is kept in place at all times, reducing the likelihood of the graphics card's PCB from bending

The ASUS STRIX R9 Fury requires two 8-pin PCIe plugs to power up, eating up roughly around 375W of power

+ Performance
Design

– Price
Power consumption

CHIP CONCLUDES

The R9 Fury is a superb graphics card, and the ASUS Strix cooler simply makes it better, thanks to its temperature regulation capabilities and Zero db silent fan operation, making the card silent and powerful.

Xiaomi Mi Note

Price: RM1,549
Contact: Xiaomi
Phone: 1 800 28 1882
Info: www.xiaomi.com/my

Display: 5.7" IPS @ 1920 x 1080 pixels
Processor: Snapdragon 801 2.5GHz CPU
Connectivity: 2G/3G/4G LTE/WiFi/Bluetooth
Memory: 3GB **Storage:** 64GB
Operating System: MIUI 6, based on Android Lollipop 5.0
Camera: 13 megapixel

3DMark:
Ice Storm: Maxed Out
Ice Storm Extreme: Maxed Out
Ice Storm Unlimited: 20,657 points
PCMark for Android: 4,779 points
Antutu: 46,176 points

Performance:
Features:
Design:
Value:

By Sharil Abdul Rahman

Take a Note
Xiaomi's big phone is big in features

The online smart device company from China is making more waves with every product introduced by them. Starting with smartphones, they have ventured into more lifestyle devices which is currently big in the home country, but may see a release here in Malaysia. Going back to their smartphone line, they launched this model earlier this year, and it is finally available in Malaysia. Say hello to the Xiaomi Mi Note.

While there are two models for the Note, Xiaomi has elected to bring in one model for our market, but in return, they have bought the largest capacity model for users in Malaysia. So, while the Mi Note has the older Snapdragon 801 (which is still a competitive processor), it also comes with a whopping 64GB of internal storage. It is more than enough to negate the lack of a microSD slot. We wish more companies will have high capacity devices here.

Rounding up the package is 3GBs of RAM, a 5.7inch screen from JDI, a 13-megapixel back camera plus a 4-megapixel front camera, 2.5D glass front, and support for 4G LTE using both the FDD-LTE and TDD-LTE

bands. Yes, this phone can roam in its home country of China.

Using the Mi Note as our daily driver is a mixed bag, at least for this writer. On one hand, the hardware is excellent, with the curved back providing a comfortable hold in your hands. The large screen is great for multimedia, especially with the Sunlight Display technology, introduced in the Mi4i. The metal construction also helps in rigidity and classy factor.

However, the older processor does mean that it is not as efficient as the newer devices with newer chips, MIUI is quite the polarising factor for users, and it doesn't have any gesture commands that fast becoming in-vogue among manufacturers.

Even so, the processor is still a powerhouse, especially for content playback and games. With very respectable scores in both 3DMark and PCMark for Android, the Mi Note is no slouch in the performance department. Thanks to the 3000mAh battery, it can go for a full day without resorting you to search for your power bank in your bag. Plus, at its asking price, the phone is good value for money.
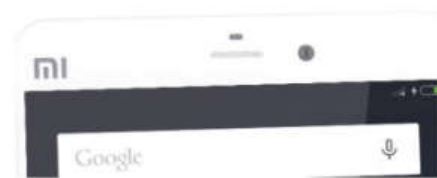
Xiaomi's front camera is a good one - especially with the beaufity mode

+ Solid design
Large internal storage

— Dated processor

CHIP CONCLUDES
The best Mi phone from Xiaomi thus far. Would be nicer if the processor is a current generation.

ASUS G751JT

Price: RM5,899
Contact: Build Technology Supply Sdn Bhd.,
Servex (Malaysia) Sdn. Bhd.
Phone: (03) 79553699, (03) 80246688 **Info:** www.asus.com/my/

Operating System : Windows 8.1
Processor : Intel(R) Core(TM) i7-4710HQ @ 2.50GHz
Memory : 8GB 1600MHz DDR3L **Storage :** 128GB SSD and 1TB HDD
GPU : NVIDIA GeForce GTX 970m 3GB GDDR5
Panel : 17.3-inch IPS FHD w/ anti-glare
Connectivity : Integrated 802.11a/b/g/n/ac, Built-in Bluetooth 4.0,
10/100/1000 Gigabit Base T
Others : HD Web Camera, 1x VGA port, 4x USB 3.0 ports, HDMI port,
Thunderbolt port, SD card reader
Dimensions : 16.4 x 12.5 x 0.9 inch (WxDxH) **Weight :** 3.81kg

3D Mark
Firestrike: 6,710 points **Firestrike Extreme:** 3,456 points
PC Mark
Home: 3,930 points **Creative:** 4,017 points **Work:** 3,398 points

Performance:
Features:
Design:
Value:

Who Let the Beast Out!?

ASUS ROG showing us laptop gaming is far from dead

By Nixon Ng

A beast of a machine at the tip of our fingers, so black, so red, so elegant, yet...so...powerful. We at CHIP had the grand opportunity to test this ravaging beast. Weighing in at a hefty 3.81kg, this is a machine you won't be carrying about in your backpack if you want portability.

Housed within this behemoth is the Intel Core i7-4710HQ clocking in at 2.50GHz and a NVIDIA GeForce GTX970M 3GB DDR5. Combined with 8GB of 1600MHz DDR3L RAM and a Sandisk 128GB SSD, the G751JT is geared to provide the best gaming experience possible. The display is a 17.3-inch FHD IPS Panel with an anti-glare coat and features NVIDIA's G-Sync technology minimising frame-rate stutter and eliminates visual tearing.

What we like about the keyboard are that some of the keys have special functions, such as the Steam key which will open Steam in its Big Picture mode which we found really cool. There is also a one-click record key when you wish to record on the fly. But of course, we can't miss out on the ROG key which opens a GUI that can be used to customise gaming profile settings, macro key's, or to open the GamerFirst III application.

Gaming on the G751JT is a unique experience with the 17.3-inch FHD IPS Panel as it displays colours which are lush and vibrant and the ASUS Trinity Display technology works flawlessly to connect multiple displays for us to enjoy. Further enhancing the gaming experience is MaxxAudio, a professional-grade processing tool combined with ROG Audio Wizard giving you total mastery over your in-game sounds. And giving that extra 'OOMPH', the G751JT includes a Bass Eye, which is an internal subwoofer that hits all the right lows.

While gaming, the laptop stayed cool throughout our gaming time with no compromise on graphic performance. The dual-fan cooling system seems to be doing its job of keeping the laptop cool even during high performance gaming, though you might feel a bit of warmth on the right side of the keyboard. Battery life on high performance plan is pretty good but don't expect to game for long hours on battery power.

Witcher 3 on Medium settings plays smoothly while bumping up the settings to High and Ultra, you will start to feel the frames drop but still playable if there isn't a lot action going on-screen.

The ergonomically-angled keyboard is just so well done

Has 4x USB 3.0 ports, HDMI, VGA and a SD card reader

+ Special keys
Ergonomic-
angled keyboard
Anti-glare coating
Silent

— Price

CHIP CONCLUDES
Though being large and heavy, the G751JT brings to table a load of performance and features that would make any gamer happy. At it's price you could get a PC with better hardware but if you're on-the-go this makes a good alternative.

Epson L220

Price: RM 489
Contact: Epson Malaysia Sdn. Bhd.
Phone: (03) 5628 8288
Info: www.epson.com.my

Type: Inkjet
Max Paper Size: A4
Max paper count: 50 sheets
Scanner: Yes, 1200 x 600 DPI
Connectivity: USB
Card Reader: No

Performance:
Features:
Design:
Value:

By Sharil Abdul Rahman

Top Your Ink Tank Externally

Epson's continuous ink solution promises great prints at absurdly low cost

Do you remember a few years ago there was a craze for third-party continuous ink solutions for your printer? It is a blessing for struggling students who need to print big, multi-page documents for their assignments, or even small businesses that need to print considerable number of pages for their needs. Epson saw the trend, and now is the only company in the world to have first-party continuous ink solutions for users. The new Epson L220 is the company's latest model, and it is loaded to bear with functions.

Continuous-ink solutions for printers basically means that the ink tank lives outside of the body of the printer. Instead of cartridges, the printer prints via feed-tanks, connected to the print head inside. This gives users the flexibility and cost-saving feature of only needing to top-up empty tanks rather than replacing spent cartridges. This both saves money and the environment, as only the ink is topped up, rather than new waste is generated with spent print cartridges.

The L220 is the latest model in the range, aimed for those who are looking for low cost and high yield printing. Thanks to the micro-piezo technology print head, print quality is excellent and sharp. With speeds of up to 27 prints per minute for text printouts, the L220 can go up to 4000 pages with one bottle of black ink, or 6500 pages with the whole CMYK colour set. That is a lot of pages to be printed out.

Apart from the continuous ink system, the L220 is your typical all-in-one printer. It can scan, copy and print – and if connected to a PC – scan to file for digital archiving purposes. Thanks to a 600 x 1200 dpi scan resolution, scans will be sharp and clear. In draft mode, printed copies can be made in just 5 seconds for black & white, 10 seconds for colour.

Our only problem with the printer is the long first-time set-up period. Because it is using an external tank, it needs up to 20 minutes to 'charge' the system with ink. However, it is only a one-off action, thus subsequent usage will be swift.

The best proposition for the L220 will be the running cost – at only RM20 for a 70ml bottle, it is economical to use for bulk printing.

With every refill, you get to go a long, long way in terms of printing

+ Continuous ink without changing cartridges
Complete all-in-one features

– Messy ink top-up

CHIP CONCLUDES

If you need to print many pages for cheap, check out the Epson L220 – it is absurdly economical.

Huawei P8 Lite

Price: RM899
Contact: Huawei Malaysia Mobile Hotline
Phone: 1 800 22 0086
Info: www.huawei.com/my

Display: 5.0 inch LCD Display (720x1,280)
Processor: Huawei Kirin 620 quad-core processor (1.2GHz)
Memory: 2GB
Storage: 16GB
Operating System: Android 5.0.2 (Lollipop)
Camera: 13MP rear-facing, 5.0MP front-facing
Dimensions: 143 x 70.6 x 7.7 mm
Weight: 131g

Performance:
Features:
Design:
Value:

For Lite Use

Huawei's P8 Lite is a cut-down version of its big brother

By Nazrin Zain

The market for affordable Android phones continues to grow at a rapid pace, with many of the Chinese phones continuing to flood the market. Huawei is one such brand; after launching its much vaunted Huawei P8 smartphone, it's little brother, the Huawei P8 Lite makes its way here to the Malaysian market as well, hoping to capture the low budget corner of the smartphone segment.

As far as design goes, the P8 Lite features one that mimics the P8, but with several obvious changes, such as the backplate, which is now of a polycarbonate material as opposed to metal, as well as a slightly smaller screen, which measures in 5.0 inches vs the P8's 5.2 inch. The display resolution of the P8 Lite is also set at a slightly lower scale of 720x1280 pixels.

The P8 Lite runs on Huawei's 1.2GHz Kirin 620 quad-core processor, alongside 2GBs of RAM and 16GBs of storage, which can be expanded via using a MicroSD card, which also serves as the phone's secondary SIM slot.

At the back is a 13MP camera that also houses a dual-LED flash that helps you take some pretty nice looking shots, and alongside the built-in filters and image-editing functions, making your photos look really nice, regardless if you're taking photos in broad daylight, or a dark room.

As far as performance goes, the Huawei P8 Light does a perfectly good job as a daily phone, capable of performing tasks such as social media monitoring, texting, document editing and even watching YouTube videos without much of a hassle.

That being said, the phone does heat up to an extent when running more demanding tasks such as benchmarks, or games for highly graphical games for even just slightly extended periods of time. For the most part, lag is hardly noticeable, but run more than just a handful of apps in the background and the slowdown can get pretty noticeable.

Battery life is somewhat average on the P8 Lite, as the 2,200mAh battery that powers up the phone is good enough to last through most of the day on average usage, with you most likely needing to recharge in the evening. If you're a heavy user who is constantly on the phone all day long.

The P8 Lite features a nice 13MP camera that takes decent shots

It lso features two MicroSIM card slots, one of which doubles as a MicroSD card slot as well

+ Price
Camera

— Heat
Occasionally lags

CHIP CONCLUDES

The Huawei P8 Lite is an affordable phone that's good if you're looking for a simple phone with dual-SIM functionality that also supports 4G LTE connectivity, which is a boon for such an affordable phone.

MSI X99A Godlike Gaming

Price: RM2,299
Contact: Media Forte (Malaysia) Sdn Bhd., JW Power Marketing Sdn Bhd., AMT PC Distributors Sdn Bhd
Phone: (03) 2287 1177, (03) 2148 1307, (03) 3344 1124
Info: my.msi.com

Slot: Intel LGA2011-3
CPU: Intel X99
RAM Slots: 8
RAM Type: DDR4 (Quad Channel)
Ports: USB 3.0 x4, USB 3.1 x2 (Type A x1, Type C x2), RJ-45 x2
Connectivity: SATA III x10, Ultra M.2 SATA x1, PCIe 3.0x16 x5

PCMark 8 (Home): 4,601 points
PCMark 8 (Creative): 4,843 points
PCMark 8 (Work): 4,798 points

Performance:
Features:
Design:
Value:

CHIP Editors' Choice AWARD

By Nazrin Zain

Game Like A God

The name on MSI's latest and greatest X99A Godlike Gaming isn't just for show

Intel's Skylake processor may have just entered the market, but MSI has saved what might be considered its most ambitious motherboard for the X99 platform. Named the MSI X99A Godlike Gaming, we take a look at what this celestial motherboard is capable of.

As is customary when it comes to X99 motherboards, the Godlike Gaming features eight DDR4 DIMM slots, capable of supporting up to 128GBs of DDR4 memory, and can support overclocked memory via XMP up to 3,400MHz. The Godlike Gaming motherboard has 10 SATA III ports, one SATA Express port and one M.2 SATA port, which goes up to 32Gbps in transfer speeds. Looking to build a quad-GPU configuration? The Godlike Gaming has five PCIe 3.0 ports and enough space for some of the biggest GPUs in the market.

As far as I/O ports go, the motherboard comes equipped with four USB 3.0 ports, two USB 2.0 ports and two USB 3.1 ports, one each of Type A and Type C ports. On top of that are also two Killer LAN RJ45 ports, Killer WiFi ports, and gold-plated audio ports.

The armor surrounding portions of the Godlike Gaming motherboard is called the Dragon Cover, and serves several functions besides just looking cool with its Mystic Light colour schemes, which allows you to light up the board in a variety of colours and lighting effects. It also serves as a means to shield the components from dust, and keeping the chipset cool at all times.

Audiophiles will also like the motherboard's Audio Boost 3 Pro, which houses a variety of components, some of which include an isolated audio PCB, Chemi-Con audio capacitors, dedicated headphone op-amps and DAC, as well as a dedicated headphone-out port at the back. We tested these features with a number of headphones, and the audio quality was simply mind-blowing for a wide variety of genres.

Overclocking options are also aplenty on the Godlike Gaming, which include the new OC Engine, which supports flexible BCLK adjustments ranging from 100/125/167MHz increments, V-Check points for voltage regulation, and MultiBIOS II, which is very useful in case the first BIOS you used crashes for some reason. If these options are too complicated, there's also the MSI Gaming App, which allows you to overclock your PC in just a number of clicks. ▣

The Dragon Armor with the GODLIKE name not only makes the Godlike Gaming motherboard look cool, it also keeps the components from dust
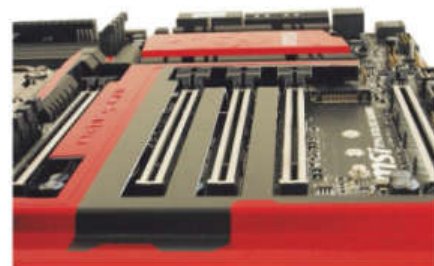
The PCIe ports on the Godlike Gaming motherboard are also reinforced with metal to ensure that the slots don't break under pressure from using big and heavy cards

+ Performance
Modding options aplenty

– Price

CHIP CONCLUDES

The MSI X99A Godlike Gaming motherboard is easily one of the most feature-packed X99 motherboards out there at the moment. If you're looking for something with both style and substance, and don't mind the asking price, this is a great motherboard to consider.

Fitbit Surge

Price: RM 968
Contact: Ingram Micro Sdn. Bhd.
Phone: (03) 7952 8188
Info: : www.fitbit.com

Display: 1.34"
Connectivity: Bluetooth
Sensors: GPS, accelerometers, gyroscope, heartrate monitor
Port: Proprietary charging
Touch Screen: Yes, Capacitive
Weight: 76.5 grams

Performance:
Features:
Design:
Value:

By Sharil Abdul rahman

Surging Ahead in Health Tracking

FitBit Surge gives the power exerciser a one stop info display on their wrist

Health Tracking has become a multi-billion-dollar industry, with companies left and right pushing out devices that one wears on their wrist, and will track everything from heartbeat all the way to where you are in the middle of your daily run. FitBit is one company that has been in the forefront of health tracking technology. We are happy to say that we managed to grab one unit from them, and it is the latest device – the FitBit Surge.

For the first time in the company's history, FitBit has presented users with a device that actually looks like a wrist watch. Previous devices resemble wrists bands, but the Surge is the first in the company that uses a touch-sensitive OLED display unit. By just swiping left or right, the various modes of the device can be accessed.

As per other FitBit devices, the Surge needs to be synced to a smartphone for initialisation. But unlike the other FitBit range, the Surge can work independently. In the Surge, it has several sensors which includes GPS, pedometer and accelerometer.

It also has the PurePulse heart rate monitor so you can have your heart rate monitored throughout the day – even when you are sleeping.

The Surge has a tilt-design so that when you wear it on your wrist, you can easily monitor your stats on the monochrome display when you turn your wrist towards you. Plus, it also syncs with your phone in giving you notifications for your calls and messages. No social media notifications however, and FitBit stayed mum when we asked them if that feature is coming to the surge anytime soon.

If you are the kind of person that will go ahead for a jog even in the rain, fear not as the Surge is water resistant – which means that even in a short shower it is not affected by liquids.

Charging the Surge is fast, but tricky – as the charge port sits at the back of the device, and you need to have it off your wrist. It only takes 20 minutes for a full charge however so it is a short period of time off your wrist.

The heart rate monitor is clearly seen here, along with the proprietary charging contact points

+ Suite of sensors
Interactive display
Independent operations

− Price
Only supports SMS and phone notifications
Rubber band picks up dust easily

CHIP CONCLUDES
A good fitness tracker for the serious at heart, but other than that, its is a weak smartwatch

Xerox DocuMate 3215

Price: RM2,454
Contact: Fuji Xerox Asia Pacific Pte. Ltd.
Phone: (03) 2191 1888
Info: www.fujixeroxprinters.com.my

Type: ADF
Scan Speed: 25ppm/44ppm duplex (Black and White @ 200dpi) // 25ppm/44ppm duplex (Colour @ 150dpi)
Optical Resolution: 600dpi
ADF Minimum Document Size: 75mmx51mm
ADF Maximum Document Size: 216mmx965mm
ADF Capacity: 50 pages
Document Thickness(min-max): 49-120g/m2
Dimensions(paper trays extended): 284x261x261mm
Weight: 2.3kg

Performance:
Features:
Design:
Value:

By Nixon Ng

A Mate Everyone Should Have

Xerox hits the spot with the DocuMate3215, with a perfect blend of size and functionality

Sitting in the corner of our desk, anyone would find it hard to believe that this baby is capable of scanning pages at an incredible rate. With the software bundled together, the DocuMate 3215 makes scanning simple, efficient, and hassle free.

Right out of the box, the DocuMate 3215 looks incredibly compact when the trays are folded. Expanding the trays made the DocuMate 3215 slightly larger but still being able to fit nicely on the desk. Although small, the ADF(Automatic Document Feeder) is capable of holding up to 50 pages which is quite a significant amount and handles everything from business cards to A4/letter size documents. Feeding the documents is simple, all you have to do is put the pictures and documents you want to scan into the feeder bay on top.

The DocuMate 3215 features OneTouch, a feature that allows users to scan and save to a destination of their choice. From a selection of 9 available preset functions which are completely user configurable. Just hitting the Simplex(one-sided) or Duplex(double-sided) button will not only instantly scan and save to its preconfigured destination but also follow resolution, colour, cropping, and file format settings. Image quality wise the DocuMate

3215 produces crisp clear images and great colour reproduction, a product of Acuity, a technology using advanced algorithms and dynamic thresholding that improves visual clarity of anything scanned. It is nice to note that even though it scans fast, it is still able to yield such a high quality reproduction, staying true to its specifications.

Bundled together with the DocuMate 3215 is OmniPage Pro, PaperPort, and Nuance PDF Converter which we found incredibly useful when used together with the DocuMate. Converting our files instantly into editable text, or converting our scanned images into digital formats such as PDF files, makes organising and searching a lot easier. A side note when using OmniPage Pro is that when adding more images after the initial scan, the DocuMate scan settings will appear in the background of the OmniPage application just in-case your wondering why it didn't pop up like the first time.

The Xerox DocuMate 3215 comes at a steep price, but without a doubt it is a quality product. Able to scan and save high quality images in a quick and efficient manner with features such as the OneTouch makes the Xerox DocuMate 3215 a scanner that will rarely leave the user wanting more.

Spreading its wings in all its glory

Scanning to a destination at the touch of a button

+ Compact
OneTouch
Image reproduction

— Price

CHIP CONCLUDES

With so many customisable options available, and easy to use features the Xerox DocuMate 3215 should easily find a place in any office or home that requires a simple yet compact solution.

GIGABYTE Z170X-Gaming G1

Price: RM2,355
Contact: Nation-Tech Sdn.Bhd.,
Ban Leong Technologies Sdn Bhd
Phone: 03-4280 6636, 03-79566300
Info: www.gigabyte.my

Slot: Intel LGA1151
CPU: Intel Z170
RAM Slots: 4 **RAM Type:** DDR4 (Dual Channel)
Ports: USB 3.0 x6, USB 3.1 x 1 (Type A), HDMI x1,
KillerLAN RJ-45 x2
Connectivity: SATA III x6, Ultra M.2 SATA x2, PCIe 3.0x16 x4

PCMark 8 (Home): 4,648 points
PCMark 8 (Creative): 5,121 points
PCMark 8 (Work): 4,954 points

Performance:
Features:
Design:
Value:

There's No Kill Like Overkill

GIGABYTE goes nuts with its Z170X-Gaming G1 motherboard

By Nazrin Zain

Every once in a while, we get to see PC component manufacturers go completely crazy on a new processor platform, throwing anything and everything they can into a product that screams 'Because we can". GIGABYTE seems to get the right idea in going crazy with one of their high end Intel Z170 motherboards in the form of the GIGABYTE Z170X Gaming G1.

The Gaming G1 motherboard comes equipped with four DDR4 DIMM slots, capable of supporting up to 64GBs of DDR4 memory, which you can also overclock to a whopping 3,600MHz, assuming the RAM supports it. It has two M.2 SATA connectors, with transfer speeds of up to a whopping 32Gbps, six SATA III 6.0Gbps ports, and four PCIe 3.0 slots, which supports both 4-way NVIDIA SLI and AMD CrossFireX multi-GPU configurations.

The PCIe slots are also reinforced by GIGABYTE's Ultra Durable Metal shielding, which helps to provide the slots with extra strength to support the heavier graphics cards, reducing the fear of the cards bending, or the slots themselves breaking. At the back, the I/O ports consist of six USB 3.0 ports, two USB 2.0 ports which also double as DAC Up ports, which can be used to connect USB DACs to, a USB 3.1

Type C port, a HDMI port and two Killer LAN RJ45 ports.

Describing each and every one of the features on board the Gaming G1 is a monumental task, but one thing this motherboard has that the rest this month definitely doesn't is a front panel bay for USB 3.1 Type A and Type C ports. This board is also designed with water-cooling in mind, as it features water block tube connectors and threaded fittings, tailor-made for both custom-built and off-the-shelf water-cooling systems.

Speaking of overclocking, the Gaming G1 also comes with a feature called Turbo B-Clock which allows users to change their BCLK frequency to a value that they want. With Turbo B-Clock, frequency values of 90 to 200MHz are now possible, so you're not just limited to increments of 5.0 percent ranges of the processor clock speed.

Looking to optimise your PC's performance in just a few clicks? The GIGABYTE EasyTune does everything for you, and during our short time with the motherboard, we were able to optimise various settings without having to toy with the BIOS at all. Performance-wise, the Gaming G1 motherboard is a beast.

The PCIe ports on the GIGABYTE Z170X Gaming G1 is coated with Ultra Durable Metal shielding so that the slots are less susceptible to bending and breaking when used with heavy graphics cards
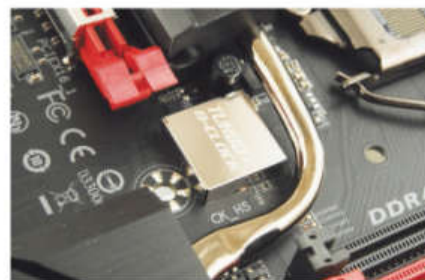
The Turbo B-Clock feature allows overclockers to set the BCLK value right down to the nearest 90-200MHz value of their choice, providing even more custom clock values to maximizing performance

+ Performance
Built-in watercooling
options

− Price

CHIP CONCLUDES
The GIGABYTE Z170X Gaming G1 motherboard is a beast of a motherboard. The company went all out and this one and it shows not only in terms of features, but performance as well.

Huawei Talkband B2

Price: RM 588
Contact: Huawei Malaysia Mobile Hotline
Phone: 1 800 22 0086
Info: www.huawei.com/my

Display: 0.73-inch, 128x88 pixels
Connectivity: Bluetooth 3.0
Battery: 95mAh
Durability: IP57 – Water and Dust resistant
Operating System: Android & iOS
Dimensions: 22 x 11.88mm (WxD)
Weight: 30.6 grams

Performance:
Features:
Design:
Value:

By Sharil Abdul Rahman

Shiny Health Band

Huawei's Talkband B2 proves that refinement can be the key to success

Health bands are the in thing to have, apparently by manufacturers. From big stalwarts of the industry all the way to comparatively unknown companies – everyone has their vision of that a health band should be like. You have seen other company's interpretation before in the magazine, but not many companies have version two of their health band out so soon. Huawei is in the minority, as their latest health band is in our hands (well, on our wrists actually) for us to test out – the Huawei Talkband B2.

If compared with the original Talkband, this version is much more refined and a little bit classier than its predecessor. In contrast to the all plastic constriction, the B2 sports a metal build, mainly using aluminium. This gives the B2 a more sophisticated look.

Like the B1, the B2 is a two-in-one device. Apart from monitoring your health biometrics (apart from you heart rate), it is also a hands-free headset. You just press two buttons on the side of the device to unlatch the headset, and you are good to go. Our initial impression is that the earbud – which can't be changed for a different size – will not fit comfortable in the ear. We were wrong. Not only it was comfortable, even the most vigorous head shaking will not dislodge the headset from your ear.

Functions wise, the B2 gives the user several metrics for collecting data – sleep, walking, running and step taken every day. It is also a watch, as well as a notification window for your messages and calls. Sorry, no social network app support here. With the Huawei Watch app, you can also synchronise your health data with your phone, so you can review it for later use.

Two main gripe with the product – the glass-like facade means it is next to useless when used in direct sunlight, and the earpiece may not fit in smaller ears. Other than that, the B2 is an excellent smart device to own and to put on your wrist.

You can almost see yourself there...

The dual mode is clearly seen here - it is a Bluetooth hands-free device for your phone. Nifty!

+ Classy looks
Useful hands-free mode

— Does not display social network notifications

CHIP CONCLUDES
Surprisingly, this is one health band that we don't mind having on our wrists. Wished that it can show our twitter notifications.

OPPO HA-2 Portable Headphone Amplifier

Price: RM 1,319
Contact: OPPO Malaysia
Phone: 1800-88-6776
Info: www.oppo.com/my

Frequency response: 20Hz – 20kHz
Recommended impedance: 16ohm-300ohm
DAC Chip: ESS Sabre Reference ES9018-K2M
Built-in battery: 3,000mAh
Dimensions: 68 x 137 x 12mm
Weight: 175g

Performance:
Features:
Design:
Value:

Bring Your Audio To The Next Level

OPPO's HA-2 headphone amp steps up your headphone game

By Nazrin Zain

Alongside the OPPO PM-3 headphones, OPPO has also launched another audio product in the form of a portable headphone amp, the OPPO HA-2. Meant for use by audiophiles who are looking to bump up the audio quality and levels of their favourite headphones, there's more than meets the eye when it comes to this device.

Much like the PM-3, the HA-2 is an elegantly-built device, featuring an aluminum chassis that's not all that different than the one seen on the headphones, wrapped in black faux leather to accentuate the premium look and feel of the device.

At the top, the volume knob doubles as the HA-2's switch, and accompanying it are two 3.5mm ports, one for the headphones, and the other for line out from PCs and such. At the side, the HA-2 has a battery level indicator, as well as a Bass Boost button which gives any audio output devices the amp is connected to a noticeable bump to the bass levels.

Featuring hybrid class AB amplification and a USB DAC that supports 384 kHz PCM and DSD256, the HA-2 offers high performance digital-to-analog conversion which supports a variety of devices, including Apple's iPhones,

Android devices, MAC OS and Windows-based PCs and even the new Sony Walkman.

The HA-2 utilises ESS Sabre reference DACs that helps deliver crystal-clear audio, with very little noise and distortion. Coupled with the HA-2, the PM-3's audio performance is elevated a fair amount, with increased treble and bass levels that complement the headphone's already impressive audio quality.

Using the HA-2 is a simple affair, but it is well-advised that you read the manual first, as it comes in three different modes that are used for three different devices. At the bottom of the device is a switch that toggles between A, B and C, and these alphabets dictate which output the amp has active. Beside it is a VOOC microUSB charging port, which allows the HA-2's internal battery to charge from empty to full in 30 minutes. Based on our tests, OPPO's claims here are not far off as it took us roughly around 30-40 minutes to fully charge the amp.

Besides functioning as a portable headphone amp, the HA-2 also has a secondary function as a power bank. Inside it is a 3,000mAh battery that is able to power up most smartphones quite quickly.

The OPPO HA-2 features headphone-in and line-out ports for a variety of old-school audio setup

The amp supports a variety of audio input, from line-out, USB and even micro-USB that makes it a truly versatile amp

+ Audio performance
  Versatility
  Device support

− Price

CHIP CONCLUDES

The OPPO HA-2 portable headphone amplifier performs as great as it looks. Whilst it pairs best with the PM-3 headphones, our tests with other brands, show that they too stand to gain some treble and bass boosts, resulting in a rich-sounding audio experience.

OPPO PM-3 Planar Magnetic Headphones

Price: RM 1,619
Contact: OPPO Malaysia
Phone: 1800-88-6776
Info: www.oppo.com/my

Driver size: 55mm x2
Impedance: 26 ohms
Ports: 3.5mm audio port x1
Others: Detachable audio cable with audio controls
Weight: 320g

Performance:
Features:
Design:
Value:

By Nazrin Zain

Next Level Audio

OPPO's new PM-3 planar magnetic headphones is geared for the audiophile crowd

OPPO might be familiar to you as a brand that mainly deals with smartphones, but did you know that they also have a hand in a number other consumer-grade products as well, including headphones and Blu-Ray players? The company is looking to diversify its portfolio, and the OPPO PM-3 planar magnetic headphones is part of its initiative.

The PM-3 is a beautifully crafted pair of headphones, with a majority of its chassis built from aluminum, all wrapped in comfortable leather for the ultimate in premium look, feel and comfort, especially during long periods of usage.

Being a pair of flagship headphones, the PM-3 utilises a pair of planar magnetic drivers which help in recreating the experience of listening to a pair of high-quality 2-channel speaker system. These new 55mm drivers have solved problems that face many other headphone manufacturers in the past, such as size and difficulty in driving them, especially since planar magnetic drivers are notorious for their high impedance levels.

The closed-back nature of the PM-3 also makes this the perfect pair of headphones to use to block out noise from the outside, which is especially great if you need to concentrate on work, or are flying halfway across the world, and don't want to be disturbed.

As far as sound quality goes, the PM-3 is an excellent pair of headphones for a number of genres, including pop, ballad and electronica. If you're into songs by popular artists such as Sam Smith, George Ezra, Ellie Goulding and the like, you'll definitely have a ball of a time with the PM-3.

The headphones accentuate the mids and low notes well enough that if you're quite likely to listen to a song in a new light, making it audible for users to actually listen to details that they might have missed out when they listened to the song on the radio.

Those with keen enough ears may notice that the bass levels of the PM-3 aren't as noticeable as some would like it when used on its own, but paired with the OPPO HA-2 headphone amplifiers, you will see a significant gain in bass and even treble levels.

The headphones are also decked in leather, for comfortable long hours of use

The PM-3 headphones feature detachable cables, which allows for easy cleanup and storage

+ Performance
Comfort

— Good with some genres, not so much with others

CHIP CONCLUDES

The OPPO PM-3 planar magnetic headphones are great for enjoying music, be you in your room, connected to your own audio system, or travelling several thousand miles for a vacation or work.

WD My Cloud EX4100

Price: From RM1,769
Contact: Amble Action Sdn Bhd, Eternal Asia (M) Sdn Bhd
Phone: (03) 7955 1768, (03) 5613 5600
Info: www.wdc.com

Number of Bays: Four
Connectivity: Dual Gigabit Ethernet
Ports: USB 3.0 x 3 (two rear, one front)
RAID: Yes
Others: Supports Volume Encryption (256 bit AES)
Dimensions: 170 x 232 x 192mm
Weight: 6.32KG (with four drives)

Performance:
Features:
Design:
Value:

By Sharil Abdul Rahman

More Storage For Everyone

King of storage WD is back with a new NAS solution for enthusiast professionals King of storage WD is back with a new NAS solution for enthusiast professionals

The worse thing to happen to a photographer is that your system complains 'Not enough storage space". The other worse thing to happen is that your system complains 'Disk not found". Imagine all of your content gone – with a flip of a switch. That is why you need a Network Attached Storage (NAS) system at your disposal. With enough storage, you can have all of your photos archived safely, and the WD My Cloud Expert Edition EX4100, you are ensured that your data will be safe.

Take note – this beast is a beast. Fully loaded, it weighs upwards of 10 kilograms or more. You can really load the EX4100 as it features four 3.5-inch hard drive bays to get a total combined storage of 24 terabytes. The four bays are also easily accessible, and you can even hot-swap full or damaged drives with a simple unlatching of the drive bay door.

For peace of mind, the EX4100 is equipped with dual of everything – Gigabit Ethernet, USB 3.0, and Power Supply-In port. The last item is important so that if one port fails, the secondary power port can be used to power the EX4100. Running the EX4100

is a Marvell ARMADA dual-core processor at 1.6GHZ, paired with 2GB of RAM for smooth and speedy access over the network or through the internet.

As with modern WD products, the EX4100 makes accessing your files a piece of cake. My Cloud OS – the operating system in the EX4100 gives you cloud-like features for your files. For example, you can access your files anywhere in the world, through a dedicated app on your iOS, Android, PC or Mac device and work on it as if it is stored locally in your machine. You can even review your media through the app, even though it is in your physical storage a continent away.

With WD SmartWare Pro software for PC users, and with the Apple Time Machine backup software for Mac users, one-touch backup is always online for sensitive and critical files.

Plus, you can link up with other popular apps such as Dropbox, PLEX, Joomla!, phpBB and many others to add more features to the EX4100. It also supports remote downloads, FTP and even Wordpress if you want to run your own blog.

You get four bays, for a total of up to 24TB. Imagine how many photos will that take in

Like any good NAS, dual redundancy system is becoming the norm here

+ Goes up to 24TB
Easy access to drives
Robust control options

− Limited to four bays
Price when fully loaded

CHIP CONCLUDES
A great NAS for those who are looking for an all-in-one solution

ASUS ROG Maximus VIII Hero

Price: RM1,199
Contact: Build Technology Supply Sdn Bhd.,ECS Astar Sdn Bhd
Phone: (03) 7955 3699, (03) 6286 8222
Info: www.asus.com/my/

Slot: Intel LGA 1151
CPU: Intel Z170
RAM Slots: 4 (Dual Channel)
RAM Type: DDR4
Ports: USB 2.0 x4, USB 3.0 x2, USB 3.1 x2 (Type A x1, Type C x1)

PCMark 8 (Home):
PCMark 8 (Creative):
PCMark 8 (Work):

Performance:
Features:
Design:
Value:

By Nazrin Zain

Become A Hero

ASUS' new Z170 motherboard showcases the best of Skylake

ASUS wasted no time updating its line of motherboards for the newly minted Intel Skylake processor, the latest desktop processor, which is meant to reinvigorate the enthusiast spirit that have been waiting for a new CPU to play with for some time now. The ASUS ROG Maximus VIII Hero is one of ASUS' many Z170 motherboards that have been lined up to take the market by storm, and we're about to see what it's capable of.

DDR4 memory was first introduced on Intel's X99 platform, and with Skylake, is now introduced to the more mainstream market. On board are four DIMM DDR4 slots, configured in dual-channel memory configuration, supporting up to 32GBs of memory, and supports overclocking up to a whopping 3,733MHz. The Maximus VIII Hero is also quite generous with its distribution of SATA ports as it features not only eight SATA III ports, but also an M.2 SATA Socket 3 Type M port that goes up to 32Gbps in speed.

As far as the I/O ports go, the Hero is configured with two USB 3.0 ports, four USB 2.0 ports and one each of USB 3.1 Type A and Type C. Rounding up the ports are a RJ-45 LAN port, one DisplayPort and one HDMI port. If you're looking to build a multi-GPU gaming PC, you'll also be happy to know that the Hero supports NVIDIA's SLI and AMD's CrossFireX multi-GPU

configurations.

As far as performance goes, without a doubt the Hero and the new Skylake processor perform extraordinarily well. Overclocking functionality on the Hero is also catered to both newbies and experienced enthusiasts, with ASUS providing the Dual Intelligent Processors 5 for one-touch overclocking and system optimisation, whilst also including an updated UEFI BIOS with enhanced controls for more advanced users to tweak with.

Not only that, ASUS has also added additional power pins for water-cooling blocks, which helps a lot if you're looking to watercool both your CPU and GPU at the same time. If audio is important to you, ASUS has also updated its SupremeFX audio input and outputs to include gold-plated ports and dedicated DACs and amps to provide you with the best sound experience without having to pay additional dollars for extra audio components.

Overclocking-wise, we managed to clock our Intel Core i7-6700K processor up to 4.5GHz on air, but we're sure with a better cooling system, it will be able to breach the 5.0GHz mark with very little issues. As far as temperature goes, both the board and the CPU ran relatively cool as well, not going above 60 degrees Celsius in our benchmarking tests.
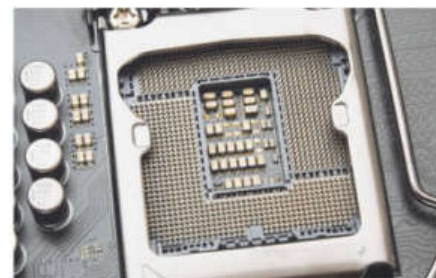
The ASUS Maximus VIII Hero uses Intel's new Skylake processors, promising excellent performance out of the box and when overclocked, while maintaining low temps

The SupremeFX audio on the Maximus VIII Hero provides users with the best audio experience without having you spend an extra dime on a discrete sound card

+ Performance
Features

— None

CHIP CONCLUDES

The ASUS ROG Maximus VIII Hero is a great motherboard to consider if you're looking to upgrade to a Skylake processor, and want to go tinkering all-out with everything both the motherboard and processor has to offer.

ASRock Z170 Extreme 6

Price: RM900
Contact: AMT PC DISTRIBUTORS Sdn Bhd
Phone: (03) 3344 1124
Info: www.asrock.com

Slot: Intel LGA1151
CPU: Intel Z170
RAM Slots: 4 **RAM Type:** DDR4 (Dual Channel)
Ports: USB 3.0 x6, USB 3.1 x2 (Type A x1, Type C x2), HDMI x1, DisplayPort x1, RJ-45 x1
Connectivity: SATA III x8, Ultra M.2 SATA x1, PCIe 3.0x16 x3

PCMark 8 (Home): 4,563 points
PCMark 8 (Creative): 4,900 points
PCMark 8 (Work): 4,878 points

Performance:
Features:
Design:
Value:

Rock Solid Performance

By Nazrin Zain

ASROCK's first foray into Skylake is an impressive one

It's not very often that we get a sample motherboard sent to us from ASRock, but it appears that the company is looking to make a big splash again in the enthusiast PC market, especially with Intel's new Skylake processors fresh on the shelves. The ASRock Z170 Extreme 6 is surely the first of many ASRock motherboards that we'll be seeing in the near future.

The Extreme 6 motherboards comes equipped with four DDR4 DIMM slots, capable supporting RAM configurations of up to 32GBs in dual-channel mode, with RAM speeds clocking up to 3,600MHz after overclocks, eight SATA III ports, one Ultra M.2 SATA port, which features speeds of up to 36Gbps. Looking to build a gaming PC with multi-GPU configuration? The Extreme 6 motherboard has three PCIe 3.0x16 slots and one PCIe 3.0x1 slot, which can support up to four cards for NVIDIA's SLI and three cards for AMD's CrossFireX configurations.

At the back, ASRock did not skimp on the I/O ports as the Extreme 6 comes well-equipped with six USB 3.0 ports, one each of Type A and Type C USB 3.1 ports, one DisplayPort, one DVI port and one HDMI port, as well as a RJ-45 LAN port.

It's clear that ASRock did not hold back on the design and component aspect of the motherboard as it is equipped with a variety of bells and whistles such as the premium 60A power chokes, aluminium alloy heatsinks that cool the MOSFETs and chipset, as well as Nichicon 12K platinum caps that have lifespans of around 12,000 hours.

For overclockers, ASRock has added a number of cool features to the Extreme 6, including a 12 power phase design which offers smooth power delivery to the CPU. This allows users to overclock the processor without having to worry about short-circuiting the motherboard or CPU. The inclusion of the Hyper BCLK Engine also allows users to more accurately overclock the CPU by providing a wider range of frequencies to choose from, giving users even more control to their systems.

All these features translate into very impressive performance numbers for the Extreme 6 motherboard. Overclocking has been made easy, with additional options available for experienced enthusiasts to min-max the performance of the PC overall. And thanks to the circuit and voltage protection provided, we also were not too worried about frying our components.
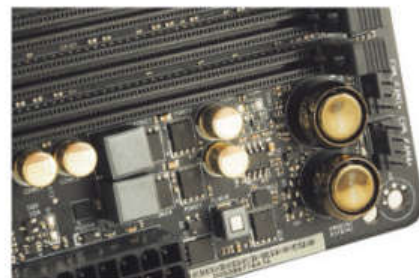
ASRock uses 12k Platinum Nichicon caps to ensure that the components last longer than other conventional motherboards

The Extreme 6 motherboard comes with a full complement of I/O ports, which includes two USB 3.1 ports, one Type A and Type C variants

+ Performance
Price

— None

CHIP CONCLUDES
The ASRock Z170 Extreme 6 motherboard is the first ASRock board we've reviewed in a while, and the brand's thrust into the Z170 market can be seen in the features that are packed into it. Definitely one to consider if you're looking to upgrade to Skylake.

ASUS Vivo PC VM62N

Price: RM2,159
Contact: Build Technology Supply Sdn Bhd,
Servex (Malaysia) Sdn Bhd
Phone: (03) 7955 3699, (03) 8024 6688
Info: www.asus.com/my

Operating System: Microsoft Windows 8.1
Processor: Intel Core i5-4210U
Graphics: NVIDIA GeForce 820M
Connectivity: USB 3.0 x4, USB 2.0 x2, HDMI x1, DisplayPort x1
Memory: 4GB DDR3
Storage: 1TB HDD, SSD optional
Others: SD Card reader

PCMark 8 (Home): 3,548 points
PCMark 8 (Creative): 3732 points
PCMark 8 (Work): 3,861 points

Performance:
Features:
Design:
Value:

The Little PC That Could

By Nazrin Zain

ASUS' Vivo PC shows that small machines can do great things

Whilst the enthusiast PC market is certainly showing signs of growth again, no thanks to advancements in desktop processor technology by Intel, we've also seen that these processors can also function in very compact environments, and to show off this concept of form and function, ASUS introduces the ASUS Vivo PC VM62N mini PC.

Encased in a polycarbonate box that's no bigger than a generous sized lunchbox, the VM62N houses a powerful Intel Core i5-4210U processor with 4GBs of DDR3 RAM and 1TB of storage space. Not only that, this tiny computer comes with an option for discrete graphics in the form of the NVIDIA GeForce 820M graphics card, which allows users to actually play some games, and watch videos in 4K resolution.

Despite being a compact computer, the VM62N has a full complement of ports, including four USB 3.0 ports, two USB 2.0 ports, as well as one DisplayPort and one HDMI port for display output. For extra network connectivity, it also has a LAN port, and additionally, an SD Card reader.

The VM62N features a special storage slot called the Vivo DualBay, which is a unique storage design that is capable of accommodating two storage drives, allowing users to mix and match storage options, ranging from high capacity HDDs and super-fast SSDs. The idea behind a tiered storage unit is an interesting one, and shows that you can have a multiple storage option in a compact PC.

Don't have speakers? Fret not as the VM62N also comes with built-in SonicMaster speakers with MaxxAudio tuning, that outputs somewhat decent audio, great for tableside listening, definitely. If you don't want too many cables cluttering the machine, it also has built-in WiFi with dual-band antennas for 2.4GHz and 5.0GHz bands and a hotspot function that allows other devices to tag on to the VM62N's internet connection.

Performance-wise, the VM62N performs as well as can be expected from a desktop PC several times its size. The tiny machine is capable of running almost everything its asked to, playing back high-definition and 4K videos, document editing, running multiple programs, and in some cases, even play games.

The DualBay system allows users to put in two HDDs, or swap one out for a faster SSD storage device

ASUS did not skimp on the port with the VM62N, as it features a full complement of I/O ports at the back

+ Compact Performance   — None

CHIP CONCLUDES

The ASUS Vivo PC VM62N is a tiny machine that punches well and truly above its weight. Nothing is skimped in this PC, and ASUS has even provided a bit of a storage upgrade solution with the DualBay system.

Intel Compute Stick

Price: TBA
Contact: Achieva Technology Sdn. Bhd.
Phone: (03) 7955 1768
Info: www.intel.com

Operating System: Windows 8.1 with Bing (upgradable to Windows 10)
Processor: Intel Atom Z3735F
Connectivity: Wifi / Bluetooth / HDMI 1.4a
Memory: 2GB **Storage:** 32GB
Others: 1 x USB 2.0 **Dimensions:** 103.4 x 37.6 x 12.5 mm

3DMark
Cloud Gate: 1,149 points
PCMark 8
Home: 1,079 points **Work:** 1,433 points

Performance:	
Features:	
Design:	

By Sharil Abdul Rahman

PC on a Stick

Intel's Compute Stick proves that you don't need a desktop for computing

If you think a Windows computer is something you have in your lap or desktop – think again. Intel is known for creating the CPU that runs almost entirety of the world. With Intel products just about everywhere, it is still a wonder they are not in your living room just yet. Presenting, the Intel Compute Stick.

The hard work of Malaysians (Yes, Intel Penang had a hand in designing the Compute Stick!) has resulted in the literal computer in a thumbdrive-sized device. When we say thumb drive, it is still way bigger than the USB sticks you have right now. However, it is small enough that you can literally hang it from your neck.

Inside the seemingly tiny thing is Intel's Atom Z3735F quad core processor, 2GBs of RAM, 32GB of storage and for this model, Windows 8.1 with Bing. Yes, this is a full PC that you can hang from your key ring. In fact, it can run just about anything you can throw at it as it runs a full version of Windows environment, so your applications and apps will run smoothly as you would expect.

It connects to your monitor via HDMI 1.4,

so you will have audio without any external audio jacks. It only has one USB port for peripherals, but you can opt for wireless as the Compute Stick comes with both WiFi and Bluetooth.

Using the Compute Stick is surprisingly snappy, even with the Atom at the heart of the stick. We got moderate results from our benchmarks, but it is expected as the Atom processor is not a high performer for performance.

What the Compute Stick excels in is portability and deployment. As it uses a full-sized HDMI port, it can use just about any screen with a HDMI port. You can use a TV as your display, and it turns into a smart TV. Load up your movies into a microSD card, slot it in and you have a portable media centre. In a pinch, the Compute Stick can even run on battery power, as it uses a microUSB as the power source.

What we envision is that the Compute Stick becoming the PC of choice for students, lecturers and even office workers. For now, it is a great portable PC, on a stick.

Don't be fooled - only the bigger USB port works for data - the microUSB is just for power

32GB is not enough? plug in a microSD to expand your on-board storage

+	−
Compact size Full Windows environment Can be powered by power banks	Only one USB port Atom chip can limit performance

CHIP CONCLUDES

A great concept for a portable computer, but may not be everyone's cup of tea.

AMD Radeon R9 390X

Price: USD$ 389 (RM1,650)
Contact: AMD Malaysia Sdn Bhd
Phone: (03) 8316 3512
Info: www.amd.com

GPU: AMD Radeon R9 390X
Memory: 8GB GDDR5
Ports: 2x DVI, 1x HDMI, 1x DisplayPort
Slot Size: Double
Dimensions: 308 x 127 x 42.3mm

Firestrike: 11,198 points
Firestrike Extreme: 5,604 points
Firestrike Ultra: 2,987 points

Performance:
Features:
Design:
Value:

Sailing From Hawaii To Grenada

AMD bringing forth another product which will catch the eye of enthusiasts and hardcore gamers

By Nixon Ng

AMD recently unveiled a brand new line of GPUs in Malaysia, one of which being the AMD R9 390X. This sample, despite bearing the SAPPHIRE Tri-X cooler is as close as we can get to the reference board, which is how the card will be reviewed as.

To start off, the R9 390X is a graphics card based on the Grenada XT graphics processor, which is a quasi-rebrand of the Hawaii XT chip from AMD's R9 290X but with higher VRAM and clock speed. The Grenada XT has a process size of 28nm and is a chip with a large die area of 438mm2 and 6.2 million transistors and operates at a clock speed of 1050MHz, and a memory clock of 1500MHz (6000MHz effective). Built into the R9 390X is 8GB of GDDR5 VRAM with a 512-bit bus width and a shader count of 2,816. The R390X uses a PCI-e 3.0 x16 and its rated TDP is 275W.

The R9 390X supports DirectX 12, Mantle, and Vulkan so don't worry as the 390X can fully utilize the API's when needed. Also it has 2x DVI, 1x HDMI, and 1x DisplayPort, but on the SAPPHIRE R9 390X Tri-X card which we received as a reference it has 3x DisplayPort, 1x HDMI, and 1x DVI. We preferred the reference

390X as we still widely use DVI and thought that the reference card had the optimal amount of each. And to power the 390X you would require a single 6-pin and 8-pin PCI-e power connector.

When running Unigine we were able to get a score of 1889 from the 390X, with an average FPS of 75.0 and makes gaming on the 390X at 1080p a breeze, when even Witcher 3 on Ultra plays smoothly. Whilst the Tri-X which was sent to us has a triple-fan cooling system, the reference 390X has a vacuum chamber cooling system. With both performing quite well under stress the Tri-X still comes out on top in terms of temperature, albeit with a weaker cooling solution the reference 390X still does a decent job keeping the card cool. But do expect many different adaptations of the 390X with varying cooling configurations from the variety of companies available in the industry.

With the 390X, AMD will continue to be a worthy contender for NVIDIA. Though losing out to NVIDIA in certain aspects, AMD has done well to make sure they are not left behind and the 390X is a bold statement saying 'we're still in the race'.

Ports found on the R9 390X Tri-X
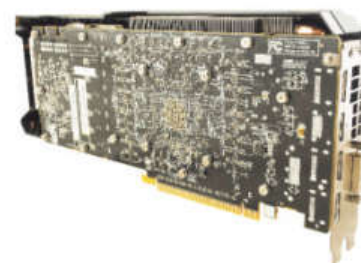
Back of the PCB for the Tri-X

+ Great card for 1080p gaming   **—** Cooling

CHIP CONCLUDES
The R9 390X might not be their flagship like the R9 290X. But with its increased performance, those who are planning to upgrade from a lower tier card can expect to be satisfied with the R9 390X.

ASUS ZenPad C 7.0

Price: RM 499
Contact: Dynamics Distribution Sdn bhd., ECS Astar Sdn Bhd
Phone: (03) 8024 2100, (03) 6286 8222
Info: ww.asus.com/my

Display: 7" IPS @ 1024 x 600 pixels
Processor: Intel Atom X3 Quad-core
Connectivity: 2G/3G/WiFi/Bluetooth
Memory: 1GB Storage: 16GB
Operating System: Android Lollipop 5.1
Camera: 2 megapixel
Dimensions: 189 x 108 x 8.4 mm **Weight:** 265 grams

3DMark
Ice Storm: 4,701 points **Ice Storm Extreme:** 3,214 points
PCMark for Android: 2,398 points
Antutu: 21,025 points

Performance:
Features:
Design:
Value:

By Sharil Abdul Rahman

A Pad Like No Other

A pretty looking ZenPad, but perhaps beauty is only skin deep?

Sometimes all you need is style. How one looks, feel and portray is as important as the inside. Yes, that sounds vain, but that is the nature of humans. No one wants to look at you when you are using a cheap-looking tablet. You must be seen with something that will not look out of place in a posh setting. Something like the ZenPad C 7.0.

The smallest of the ZenPad family, the ZenPad C 7.0 is, unsurprisingly, a 7-inch tablet. It is running Android Lollipop 5.0.2, so it is as up to date as you can get. Underneath the hood, it features an Intel Atom X3-C3200 quad-core processor, formerly known as SoFIA. Thanks to this chip, the tablet is able to make calls using 2G/3G networks. It also supports dual SIM slots, so that you can have one Sim for work, and another for play.

Overall size of the ZenPad is actually very nice. Comparable to a large lady's wallet or a pocketbook, the ZenPad C is sized nicely in the hand, without feeling overbearing or too large for anyone to use. We wished the bezel could have been a smite thinner, but the IPS panel display is good to look at, even though the resolution is only 1024 x 600 pixels.

Paired with the X3 processor are 1GB of RAM, 16GB of on board storage, expandable with microSD cards, 5-megapixel back sensor with PixelMaster technology, as well as the ZenUI overlay.

An outstanding feature of the ZenPad is the design. First announced with the ZenPad 8.0, the ZenPad C 7.0 shares the leather-like design, making it look like a wallet or pocket book.

However, with all the cool design, it suffers from a fundamental flaw – ASUS only included 1GB of RAM in the specification. This severely affects the day to day running of the tablet. While Android Lollipop can run sufficiently with 1GB of RAM, with the burden of overlays made by manufacturers – the experience suffers greatly.

The tablet can be used for simple internet browsing, video playback and simple games – but for anything more strenuous, it is not a recommended device.

The 2MP camera underperforms

Dual SIM slots is a useful feature here

+ Nice compact design
Textured back gives great grip

– Not enough RAM

CHIP CONCLUDES
A pretty looking tablet, marred by low RAM.

Kingston HyperX Fury DDR4

Price: TBA
Contact: Amble Action Sdn Bhd., Convergent Distribution(M) Sdn Bhd., Ingram Micro Malaysia Sdn Bhd
Phone: (03) 7665 3939, (03) 2144 1881, (03) 7952 8188
Info: www.kingston.com

Capacities: 4GB, 8GB DDR4 sticks
Speeds: 2,133MHz, 2,400MHz, 2,666MHz
Voltage: 1.2V
Timing: CL-14-15

Performance:
Features:
Design:

More Furious Than Ever Before

By Nazrin Zain

Kingston updates its HyperX Fury line for Skylake

A number of months back, we reviewed the Kingston HyperX Fury DDR4 RAMs meant for X99 systems. This time around, it appears that Kingston has made new updates to the same of RAM sticks as preparation for the arrival of Intel's new Skylake processor and Z170 motherboards.

For the most part, the new Kingston HyperX Fury looks exactly the same as the kits made for the Intel X99 platform. This time around, the kits come in a pair of either 4GB or 8GB sticks, to accommodate for the Z170's dual-channel memory configuration.

An interesting thing to note is that while the sticks come in 2,133MHz, 2,400MHz and 2,666MHz speeds, you can automatically overclock the sticks to 2,666MHz speeds via the BIOS settings, although this does depend on whether or not the motherboard is able to push to such speeds. That said, this really is no issue if you're using a Z170 motherboard as they are able to push RAM speeds even further than that.

Another thing to note is that the new HyperX Fury RAMs require only 1.2V of electricity to run, vs 1.4 or 1.5V on many other DDR4 RAM sticks. What this means is that the HyperX Fury requires lower currents to run, and hit similar levels of performance vs the higher voltage ones.

Lower voltage requirements do not only mean that it needs less power to run, but also allows you better overclocking headroom, allowing you to truly push the HyperX Fury's performance, if you're looking to get the highest overclocking numbers.

Performance numbers appear to be on par with the previous kit that we reviewed, although as we mentioned earlier, the lower voltage numbers are definitely what makes this new kit the slightly better one compared to its predecessor.

In this case, we checked the memory clock speeds to 2,666MHz with hardly any tweaking done, which is as Kingston claims. From there, we adjusted the voltage values a bit and overclocked the core to 2,888MHz. Further tweaks allowed us to hit the 3,000MHz threshold and the HyperX Fury held on again with no issues.
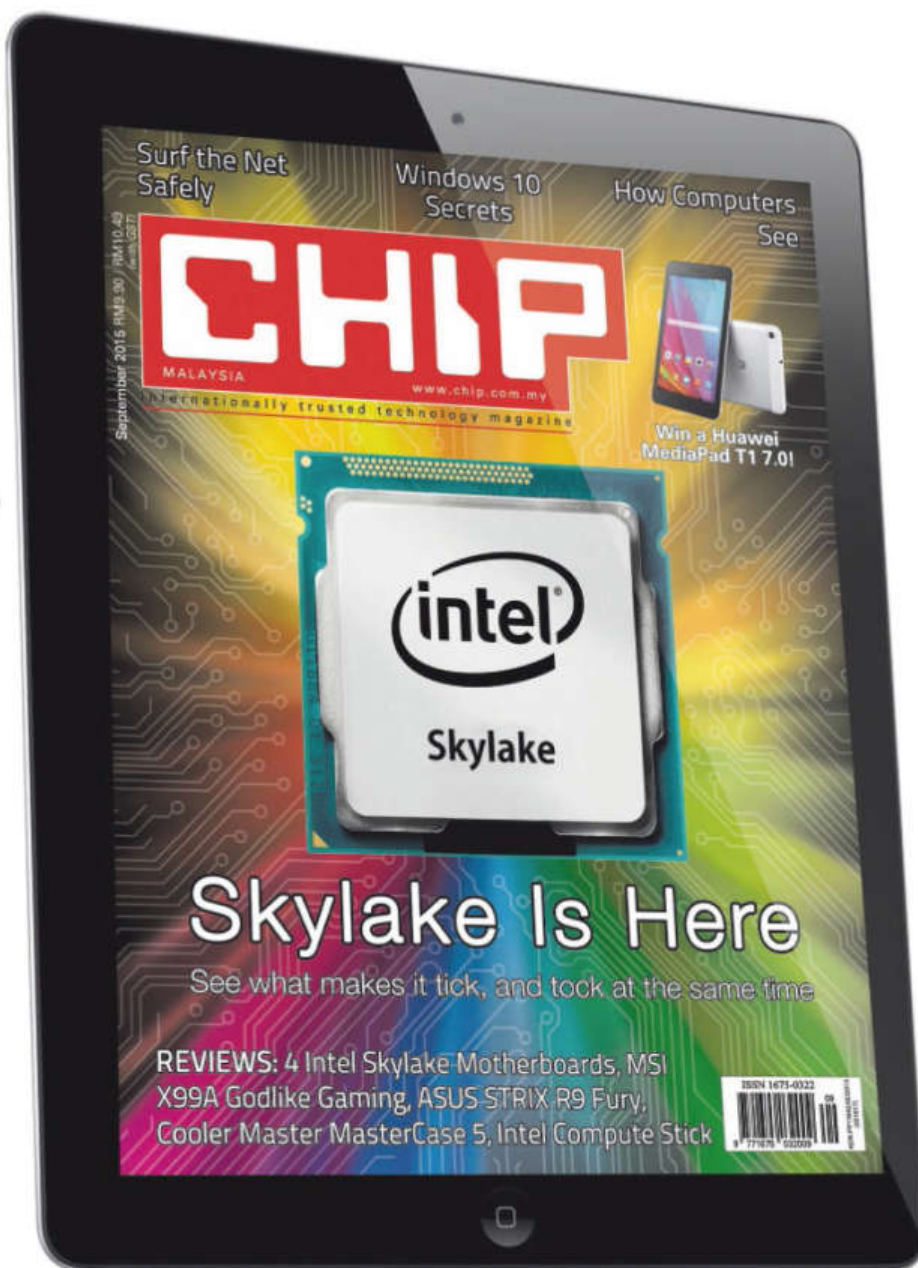
The Kingston HyperX Fury comes with low-profile heatsinks, allowing overclockers to use large heatsink fans to cool down the CPU

+ Plug and play
  Lifetime warranty

− None

CHIP CONCLUDES

Regardless if you're an overclocking enthusiast upgrading to Skylake, or just looking for memory with lower voltage values for your X99 system, The Kingston HyperX Fury DDR4 is an amazing kit for you to consider thanks to its superb overclocking capabilities and overall performance.

THERE'S A NEW
LITTLE MONSTER ALONG FOR THE RIDE

HOTEL TRANSYLVANIA 2

f SonyPicturesMalaysia

Buena Vista Columbia TriStar Films (M) Sdn Bhd (41522-P)

IN CINEMAS 24 SEPTEMBER
IN 3D

Sony Pictures ANiMATiON   HotelTMovie.net

COLUMBIA PICTURES
a Sony Company

LPF/C/NA-1/SYK660/097074/2015/Lulus

EXCLUSIVELY FOR ALL READERS OF CHIP

To WIN, simply answer the questions below!

1. What is the name of Dracula's adorable half-human, half-vampire grandson?
   ☐ Frank   ☐ Mavis   ☐ Dennis

2. Name 3 characters that "Vampa" Drac enlists to put Dennis through a
   "monster-in-training" boot camp.

   _____, _____, & _____

Cut out this section and mail to:
HOTEL TRANSYLVANIA 2 c/o
Online Dynamics (M) Sdn Bhd, A-5-07 Block A, Neo Damansara, Bandar Damansara Perdana, Jalan PJU 8/1, 47820 Petaling Jaya, Selangor Darul Ehsan.

2x Limited Edition Hotel Transylvania 2 Adult T-shirts

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2x Limited Edition Hotel Transylvania 2 Tote Bags

2x Limited Edition Hotel Transylvania 2 Stationery Sets

2x Limited Edition Hotel Transylvania 2 Drawstring Bags

GEEKMOMMY

Planning For a Child-Friendly Holiday

As a continuation from the last issue on essential items to pack when traveling with kids, lets look into the exciting part of planning for a child-friendly holiday By GeekMommy

Destination

Start with choosing the right destination and how will you plan to reach the place. If your child is afraid of flying, you may need to explore other modes of transport such as trains, ferries, boats or car. Do keep in mind the weather conditions. Younger children would not feel comfortable in extreme hot or cold weather as they get dehydrated and sunburn much faster than adults. So you will need to ensure they drink plenty of liquid and wears sunblock and a hat.

When to go

If your child is not going to school yet, try avoinding the crowds during school or public holidays. Also plan your traveling time during the day so that it doesn't interfere with their normal schedule. Flying at night saves you time but only works well when both parent and child are able to sleep well during the flight. And if you are driving, schedule in toilet and meal breaks so that everyone can stretch their legs and have short breaks to reenergize.

Daily schedule

Mornings are usually when everyone, including your child has the most energy after a good night sleep. Plan to go out in the morning and schedule your activities around meal and nap time. It is best not to be overly ambitious and pack a full day out. Break down the day to a morning and maybe an evening activity so you rest in between.

Child-friendly holidays

• Beach holiday – Remember to bring along sun block, UV swim suit, floats and some beach toys. Check to see other activities that your child could do when it rains.
• Nature trail – A hike that ends up at a waterfall or lake makes it worthwhile. Check to see what wildlife you will be able to see and play spot the animals.
• Theme parks and zoos – Check to see that they have age appropriate rides and activities for your child.

Accomodation tips

• Holiday house or family suites – a common living area and separate sleeping area would allow family members to have some privacy. If you could get a separate bedroom for adults and kids that means you won't keep the children awake. If that's not possible, a hotel room with a balcony or patio would do as well.
• Safety – check for the nearest fire exit and ensure it isn't blocked. Also check for the nearest clinic or hospital. Some hotels have doctor's on-call as well. If your room is on the same floor as the pool, check to see that it's fenced up and not easily accessible. Always ensure that you watch your child when they are in the bathroom or pool
• Self contained kitchen – having an option to prepare some meals yourself can help you keep to a budget and ensure you have snacks available for your children. ▣

Geek Mommy tries to makes sense of the tech world for the less techie while managing a household, a job and keeping a toddler busy. More of her musings at http://geekmommy.info/

Do You Remember Love From 12,000 Years?

Macross, Earth Girl Arjuna, Visions of Escaflowne, Nobunaga The Fool and Sousei no Aquarion are probably anime titles that might be familiar to anime fans. We sit down with Shoji Kawamori, acclaimed director and nature-lover about his works By Nazrin Zain

If you're an anime fan of any description, chances are that you would at least have heard of titles such as Macross, Visions of Escaflowne and Sousei no Aquarion, amongst others. At the recently-concluded Visual Arts Expo that happened last month, we managed to get some time with legendary anime producer and creator Shoji Kawamori, whose works have been a major influence in the anime industry for many, many years. He is also one of the designers of the original Transformers, a title that is known throughout the world thanks to its animated TV shows and line of toys. In this interview, we talk about his works, his motivations and how he gets inspired to create so many titles and varying mecha designs that have been the hallmark of his career.

What has been the biggest difference for you, comparing back when you first created SDF Macross and today, where your latest title is Macross Frontier?

The biggest difference between then and now for me is the usage of computers to create animation. It is now the digital era, and we're seeing studios move from traditional hand-drawn styles to a more hybrid kind of animation where cell drawings and computers are used to create what you see on television today.

The most notable and visible change these days thanks to the digital era is that it is a lot easier to do the 'camera work", where animators can work on a variety of angles without having to draw each and every scene by hand, which takes up a lot of time.

You've been working in the anime industry for so long, where did you get your inspiration to design the mecha from titles such as Macross, Escaflowne and Transformers?

Whenever I design new works, regardless if it's for a new title, or a sequel to a series like Macross and Aquarion, I don't like to copy or imitate designs from existing works. My design process usually starts from looking at things around me, like cars, or planes. What I do from there is I will study the internal structure of how these things work, like the engines, its movement dynamics, and I then take the theory of these real life designs, and implement it with my imagination to create a completely different design.

Not only that, I also look into living organisms, as things like animals and plants also give me a lot of inspiration to create not only mecha designs, but also the background and locations for various anime titles.

You managed to get permission to enter the Edwards Air Force Base for inspiration for Macross Plus at the time. Was it difficult to get permission to enter?

Before the events of 9/11, it was actually quite easy to get permission to enter the base and the get access to the planes, as the rules back then were more relaxed. It was a really nice experience, and quite a number of people there at the time already knew about the Macross series, so it was quite easy to chat with them.

While I didn't get to fly in the planes, there was a simulator on the air base I got to try, which is how I got a feel on how these vehicles operated, which is a very valuable experience for me. At the time, Ichiro Itano was also with me, and I got to do a 1-vs-1 dogfight against him. Unfortunately I did not manage to pull an Itano Circus on him as the planes had lasers on them instead of missiles.

Throughout his stay here, Kawamori-san got to visit a number of places around Kuala Lumpur. Do you have any plans to use these places as inspiration for current or future anime?

Many might not know this, but this would actually be my third time here in Malaysia. The first time I visited this country was around 25 years ago, so my image of Kuala Lumpur was still of what I remembered back in the day, although I was quite surprised to see that so many buildings have popped up since my last time here.

When I was here back then, I was inspired by the buildings in Kuala Lumpur that featured a lot of Islamic patterns and motifs. Not only that, when I saw so many people of different races, including the Malays, Chinese and Indians, I felt like Kuala Lumpur was a very open country, where people of different races mingled together, making it have this sort of international feel to it. It is this sort of feeling that I used as the basis for the Macross movie 'Do You Remember Love?", where both humans and Protocultures listened together to Lynn Minmay's song.

While most people might know you for your work on Macross, you've also done other shows like Visions of Escaflowne, which became a hit in the overseas market. What was reaction when you found out that it became a hit?

I was very happy about that. In Japan, I'm thought of as a very eccentric person. I feel that Japan is quite a closed country at that time, because its people didn't care much about what happened outside of the country. I love to travel the world to seek new experiences, and it is from there I find the inspiration to create new things, where Escaflowne was one of them. It's also during my travels that I found that there are a lot of anime fans around the world who have different thoughts about the anime that they liked.

Macross is well known for its dogfight scenes and such. After your experience at the Edwards Air Base, did you change your style to suit actual dogfight maneuvers?

Back in the day when I was still working on Transformers for Takara (now Takara Tomy), I already had some experience with the mechanics of how airplanes work, as I was taught how to control planes. That being said, it was a relatively small planes, so it wasn't exactly made for dogfights.

That being said, the dogfights that you see in most games and movies aren't exactly realistic, because real dogfights require you to look left,

right, up and down yourself because enemy planes can be anywhere, not just ahead of you.

As a matter of fact, during my dogfight with Ichiro Itano, he blacked out during a particularly peculiar maneuver, and incorporated that experience into a scene where Isamu Dyson, a character in Macross Plus blacked out.

Music is a big part of Macross, and you've worked with Yoko Kanno on a lot of Macross titles. How is your working relationship with her?

Yoko Kanno is a very interesting person to work with. For her, she needs to be inspired to create new works, and without it, it's very difficult for her to write songs. Even when she sits through a briefing, It's not enough that you explain to her what the anime is about. She will always ask what is the core of the theme of any particular anime, and she isn't moved by superficial reasons, because it is always the underlying meaning of the title that gets her inspired to compose.

As an example, for Sousei no Aquarion, it isn't enough that she was given the synopsis of it being a story that crosses 12,000 years. Even when we explained that there would be robots and combination scenes, she still wasn't able to find any inspiration for the series. After a long discussion, it was only when we explained that in one of the episodes that there is a love letter that one of the enemies wanted to retrieve from the protagonist, was when Yoko Kanno had the inspiration to write the theme of the anime, which came in the form of 'Even after 12,000 years, I still love you".

Apps For Those On-The-Go

Transportation comes in many forms in our modern day world. Cars, motorcycles, and buses fill the roads, whilst the railways trains zoom pass by. We have reached a time where public transportation is convenient and efficient. We are constantly on-the-go, so we are going to introduce a few apps that will simplify your transportation needs By Nixon Ng

Uber

This app is designed to connect riders(passengers) to drivers in a timely fashion, and aimed to give passengers a safe and friendly 'ride". Though requiring mobile data to enable your GPS, the app allows you to see all Uber drivers in your vicinity. Choosing a pickup location and drop-off destination is simple, and you're also given an option of which Uber service you want. A fare quote will be shown and all payment is done cash-less and through either debit or credit cards.
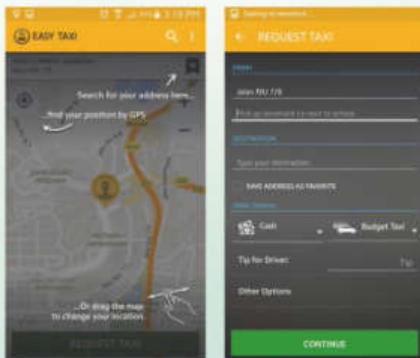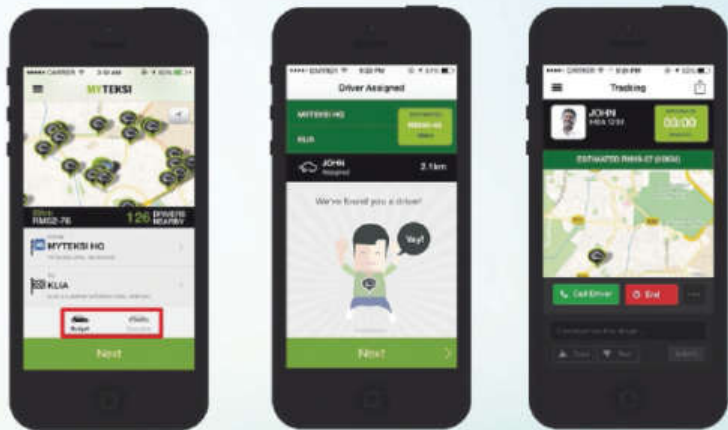
Easy Taxi

One of the most downloaded taxi app in the world, Easy Taxi is an app which connects taxi drivers and passengers at the tap of a button. Upon opening the app, it automatically detects your current location using GPS, then all you have to do is tap 'Request Taxi". You will be brought to another screen which will ask for details such as your destination which you can save as a 'favorite". Then you will have various options to choose from as payment, and a service type. You can leave the driver a tip if you so choose to.

GrabTaxi/MyTeksi

Another taxi app we will be sharing, GrabTaxi also known as MyTeksi is a Malaysian startup that aims to revitalize the taxi industry. Targeting to solve issues such as dispatch inefficiencies and passenger safety. The app detects your current location and shows how many drivers are within your vicinity. You then choose your destination and it displays the distance and the estimated cost of the ride. You can also choose different types of services to your needs.
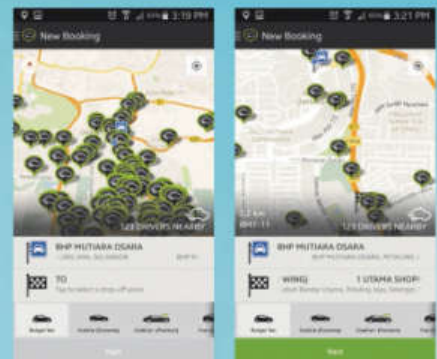
TripLog

TripLog is an interesting app which allows you to track your mileage and log your expenses. It has additional features but require you to subscribe to their services. But even without the paid features TripLog is an amazing app which you can try out. It uses actual driving routes on maps so calculating mileage will be accurate.
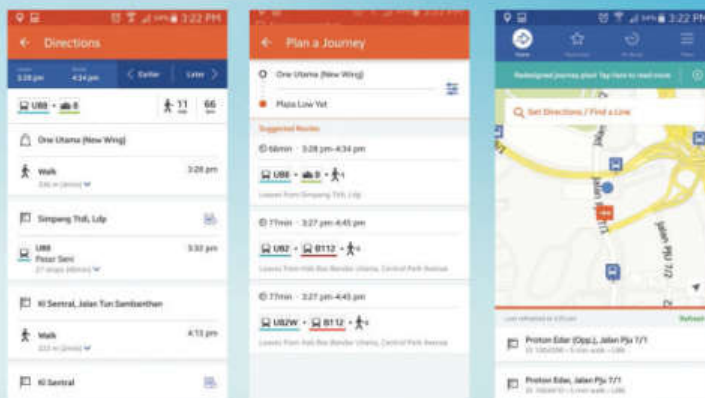
Moovit

Moovit is an amazing app if you frequently use public transportation. You can ask it for directions to a destination of your choice and it will show you different routes which you can take to reach your destination by public transportation and by walking. It will give you bus numbers/lines, and also tells you when you have to alight and switch to another bus/line. You can save addresses in the favorites tab, where you can set your Home and Work location as a starting point, or any other location which you prefer.

Metromy: Railway Malaysia

Metromy is an app which will display a map of all railway routes within Malaysia. It will provide the price of each route, switching station information, total travel distance of each path routing, and a full railway map. Searching for a path is available even when without internet access, and you can check the location of each station, or check the location distance from you.
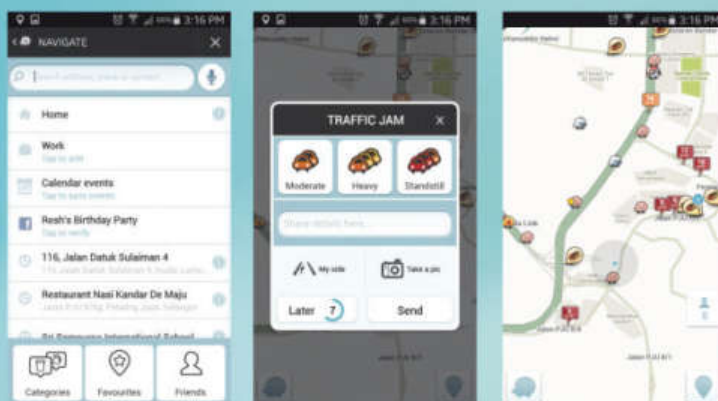
Waze

If you haven't heard of Waze it's about time you did. Waze is a Social GPS which is growing in popularity since its introduction. It is free to use, and allows users to report various objects or occurrences. You can report traffic jams, police sightings, accidents, hazards and many others which you can also show by taking a picture. The report will then be given to all Waze users who are currently on the same route or just displayed on the map for everyone to see. As a social GPS, Waze allows drivers to communicate with each other through messages and viewing each other's profiles.

Crusader, meet Knight

By Sharil Abdul Rahman

Beware of the Bat.
That is the mythology of Batman, and for the past six years, the good people at Rocksteady Studios have been hard at work in building up the story of the caped crusader, and his adventures in and around Gotham City. The road finally ends with the latest instalment, Batman: Arkham Knight.

From the small beginnings on Arkham Island, the world that Batman lives in now has expanded into a true city, as Gotham becomes your playground. The city was evacuated after Scarecrow threaten the citizens of the city with his updated and more potent fear toxin. Batman as usual swoops in to save the day – and that is where and when his trouble starts.

Playing Arkham Knight is reminiscence of the previous Batman games – which is logical seeing that Rocksteady developed this game. The chain attack moves first shown in Arkham Asylum is back with a vengeance in Arkham Knight. Batman now poses the

ability to do Fear Attacks – which is needed as his opponents are now tuned to his style of combat. This new twist comes courtesy of the second protagonist of the game – Arkham Knight.

In his quest to free Gotham from the clutches of the Scarecrow/Arkham Knight combo, he will face challenges, meet friends and foes – both new and old. The venerable Commissioner Gordon is still running GCPD, helping Batman whenever and wherever he can. Batman is also helped by Oracle,

a.k.a Barbara Gordon, alias Batgirl. After her unfortunate incident with Joker, she is wheelchair-bound and now serves as Batman's technical guru.

A new mechanic in the game is the introduction of the popular Bat Mobile. What is different with this vehicle is the inclusion of a 'tank' mode, where instead of speed, the Bat Mobile will go against drone tanks. Equipped with a 60mm round canon, each shot is a devastating blow to the enemy.

Batman has also upgraded himself in this game. His new armour gives him more protection from both melee and ballistic enemies, plus he can now glide longer and further than before – fitting as Gotham City is now several magnitudes bigger than Arkham Island or Arkham City.

The big boo-boo with Batman this time around is the Bat Mobile. While it is fun driving around (and smashing everything around you – seriously, the environment is destructible), the annoying segments will be when you control the tank mode to either go against the enemies, or use it as a tool in your detective mode. Don't get us wrong – getting to control Batman's ultimate vehicle form is cool, but it gets repetitive real fast when you have to inch along like a crab to achieve an objective.

However, the biggest problem with this game is that Rocksteady did not see to have the PC port to be as good as the console version at launch. That, to us, is the biggest travesty for the game. It is a great game no doubt about that. We just hope the team at Rocksteady will fix the PC port ASAP.

Batman: Arkham Knight

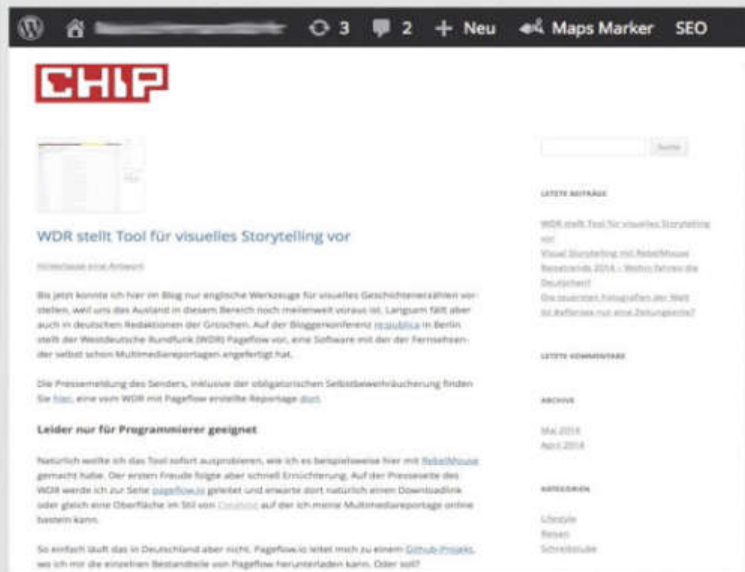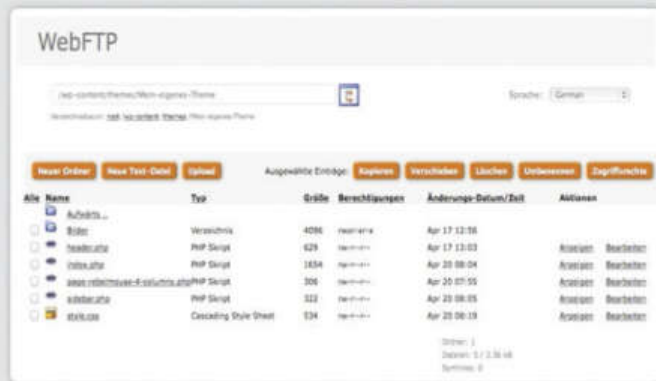**Genre:** Third person open world adventure
Developer: Rocksteady
Info: https://www.batmanarkhamknight.com/
System Requirements Platform: PS4, XBox, PC

+	Bigger playable world than previous games The Bat Mobile	−	Tedious collection system to reach true ending The Bat Mobile

Gameplay:	▣ ▣ ▣ ▣ ▢
Graphics:	▣ ▣ ▣ ▣ ▢
Sound:	▣ ▣ ▣ ▣ ▢
Replayability:	▣ ▣ ▣ ▣ ▢

WordPress Theme From Scratch

With our WordPress kit, you can create your own, anytime expandable theme and that too without any programming   By Markus Hermannsdorfer

The popular blog software WordPress can be quickly individualised with themes. Themes are made up of two modules (index.php and style.css) that contain information about the structure and the appearance. You will find the basic frame for these modules online which will suffice for a rough design of your own WordPress theme. Alternatively, we will tell you about other websites where you can download the basic frames. There is another component called Loop. This code snippet ensures that posts are easily incorporated into the theme.

Fully functioning basic structure

After you have understood steps 1 to 8, you will have a complete WordPress theme with your own logo that will display your blog posts. If you wish to expand this further, then you must be familiar with programming. The other alternative is to add widgets that take over specific functions. These extensions seamlessly insert themselves into the self-made basic frame.

How to proceed
1 Set up a new theme folder
Go to the website of your host and open your online storage there.

Go to the WordPress directory. Look for the folder "\wp-content\themes\" and create a subfolder there for your own theme according to the scheme "\wp-content\themes\Name of your own theme". The other option is to install WordPress locally on your PC. For this, you can use under Windows. Users of Apple Mac can use MAMP which is available in the Mac App Store.

2 Create important files
Create the two files "index.php" and "style.css" in the folder with your own theme.
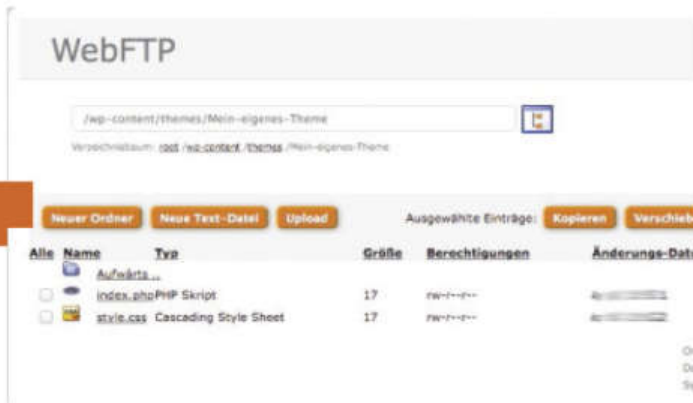
3 Plan structure of the theme
Before you put life into both the files, you should know how your theme is going to look like. In the screenshot on the right you can see the draft for this workshop. Draw your own design on paper or use a graphics program like Photoshop.
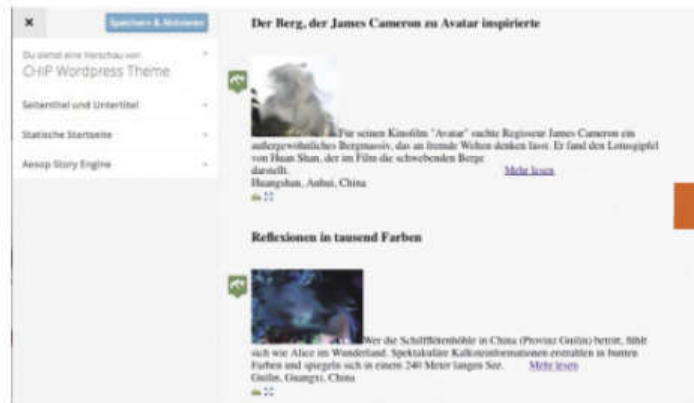
4 Create the base frame
Head to **dl.chip.com.my/wppractise.zip** and download the file to your local folder. Unzip the file and use the 'index.php' for the project.

2

/wp-content/themes/Mein-eigenes-Theme

Verschachtelung: root /wp-content /themes /Mein-eigenes-Theme

Neuer Ordner	Neue Text-Datei	Upload	Ausgewählte Einträge:	Kopieren Verschieb

Alle	Name	Typ	Größe	Berechtigungen	Änderungs-Dat
	Aufwärts ...				
☐	index.php	PHP Skript	17	rw-r--r--	
☐	style.css	Cascading Style Sheet	17	rw-r--r--	

7

Der Berg, der James Cameron zu Avatar inspirierte

Für seinen Kinofilm "Avatar" suchte Regisseur James Cameron ein außergewöhnliches Bergmassiv, das an fremde Welten denken lässt. Er fand den Lotusgipfel von Huan Shan, der im Film die schwebenden Berge darstellt.
Huangshan, Anhui, China
Mehr lesen

Reflexionen in tausend Farben

Wer die Schilfblütenhöhle in China (Provinz Guilin) betritt, fühlt sich wie Alice im Wunderland. Spektakuläre Kalksteinformationen erstrahlen in bunten Farben und spiegeln sich in einem 240 Meter langen See.
Guilin, Guangxi, China
Mehr lesen

3

Header

Content

Sidebar

Footer

Wrapper - Das Fleisch außen rum

8

Markus Hermannsdorfer   3   1   + Neu   Maps Marker   SEO

CHIP

Der CHI

Navigation

WDR stellt Tool für visuelles Storytelling vor

06.05.2014 | wordpressadmin |

- Schreibstube

| Der CHIP Wordpress-Blog

Bis jetzt konnte ich hier im Blog nur englische Werkzeuge für visuelles Geschichtenerzählen vorstellen, weil uns das Ausland in diesem Ben Redaktionen die Groschen. Auf der Bloggerkonferenz re:publica in Berlin stellt der Westdeutsche Rundfunk (WDR) Pageflow vor, eine Soft angefertigt hat.

4

5

```
/*
Theme Name: CHIP Wordpress Theme
Theme URI: http://www.chip.de
Description: Unser Übungstemplate auf www.chip.de
Author: CHIP
Author URI: http://www.chip.de
*/

body          {color: #333; background: #e5e5e5;}

#wrapper      {width: 1000px; margin: auto; text-align: left; background: #fff;}
#header          {height: 140px; padding: 20px; }
#main         {width: 620px; padding: 20px; float: left;}
#sidebar      {width: 300px; padding: 10px; padding-top: 20px; float: left;}
#footer          {clear: both; height: 80px; padding: 20px; }
```

6

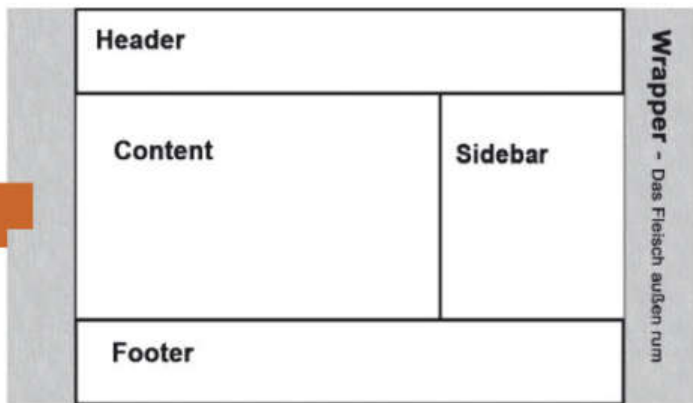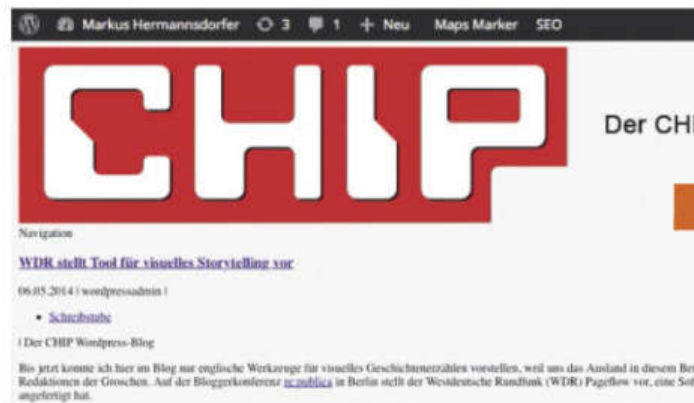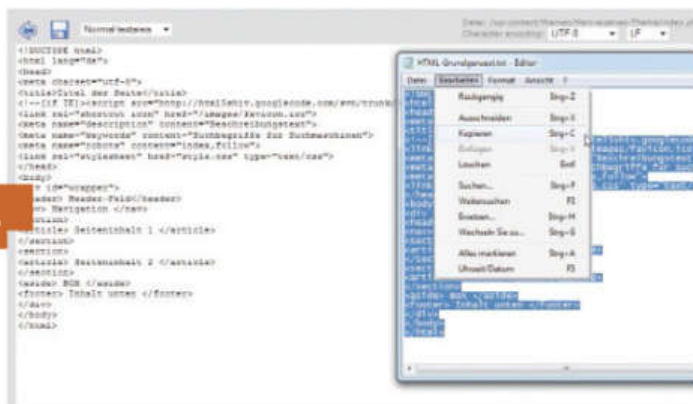### 5 Fill the "style.css" file

Now open the file "style.css". Replace our information regarding the author and the website with yours and adjust the colours are per your requirements.
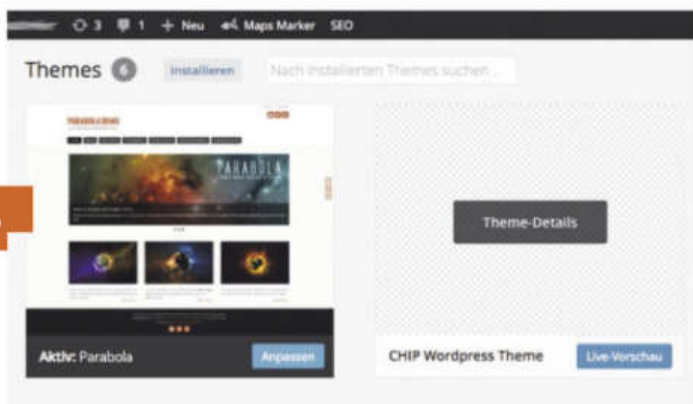
6 Test theme in WordPress

Now start WordPress and log in. Your theme should now be listed under "Design | Themes" in the dashboard. You can check the same via the "Live preview" - however there is not much to see as the graphic elements are missing.

7 Display blog posts

Open "index.php" and replace the line '<article> Page Contents1 </article>' by the code snippet "loop.txt" from our web tip. You will find the same code also on wpsnipp.com/index.php/loop/microformatted-and-html5-compliant-loop/ on the Internet. WordPress will now display your posts in the theme.

8 Add graphics elements

From the file "index.php", copy everything from the first line up to the entry '<header> Header Field</header>' into a new file with the name "header.php". Go back to "index.php" and replace the line '<header> Header Field</header>' with '<?php get_header(); ?>'. In your Themes folder, create a sub-directory "Images" and copy your logo there. Then open the file "header.php" and insert the line '<img src='<?php echo get_stylesheet_directory_uri()?>/Images/YourLogo.png' alt='Your Logo'>' after the tag '<header>'. You may delete the text "Header-Field". You have thus added your own logo. In the same manner, now create other elements like the sidebar (sidebar.php) and the footer (footer.php) as well. If you wish to make changes to the graphics later, then you can edit only the file created for that graphic, like "header.php". The "index.php" remains small and clear with this method. Your theme is now ready for use.

Get More Performance For Your SSD

In this article we show you how you can get the most out of your SSD   By Markus Herrmannsdorfer

I t's common knowledge these days that SSDs are better than the more traditional HDDs. However, if you want get maximum performance out of the Flash memory then you have to do a bit of tuning. If the SSD is performing slower with time, it is either not running in the fast AHCI mode or the TRIM function that releases the deleted blocks, has been disabled. If the base functions are not set correctly, then you can tune the SSD using a tweak tool (Step 3). In addition, Windows functions that are logical for normal hard disks, may damage an SSD and cause problems. Disabling these services makes the memory faster and also extends its life.

Steps
1 Enable AHCI Mode
Start the Registry editor and go to the key "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Msahci". Double click on »Start« and change the DWORD value to "0". Then search for the key "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\iaStorV" and again enter "0" as the DWORD value here. Restart the PC and get into the BIOS. Reset the AHCI mode for »SATA-Mode« under "Advanced Chipset Features".

2 Test the TRIM Function
Call the command prompt using Administrator rights. Type the command »fsutil behavior query DisableDeleteNotify« and confirm with [Enter]. If you get the response as "Disable-DeleteNotify = 0" then the TRIM function is activated. But if the response is "Disable-DeleteNotify = 1" then the TRIM function is no longer active. In this case, type the command "fsutil behavior Set DisableDeleteNotify 0" and again confirm with [Enter]. The TRIM function will now be activated.

3 Tune Your SSD
Install SSD Tweaker on your computer. The program will recommend the optimal settings for your SSD. Restart your PC after it's done.

4 Delete Pagefile
The Pagefile causes several write accesses and outmaneuvers the computer on an SSD. Start the registry editor to delete the file during every shutdown. Search for the key "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControl-Set\Control\Session Manager\MemoryManagement" and double-click on
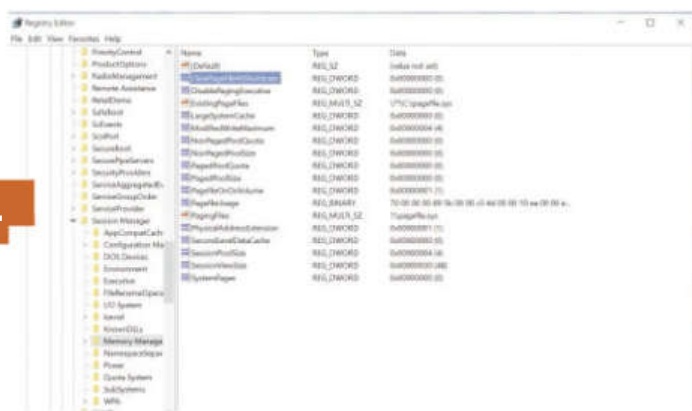
2

7

3

8

4

»ClearPageFileAtShutdown«. Enter the value as "1" and confirm with "OK". You have to restart the computer so that the change becomes effective.

5 Disable Sleep Mode

Start the command prompt as Administrator. Enter the command "powercfg -h off" and confirm. Sleep mode is disabled and the file hiberfil.sys is deleted. If you do not wish to completely shut down your PC, then you can use the Standby mode instead.

6 Disable defragmentation

Defragmentation of SSDs does not make sense as it does not make them faster. Instead, the additional write accesses only reduce the lifespan. Since Windows 7, the operating system, does not run any automatic defragmentation on SSDs for the same reason. The only exception: It has wrongly identified the Flash memory as a magnetic hard disk. This can be checked in Windows 8 by right-clicking on the drive in Windows Explorer, go to "Properties > Tools > Optimise" and check whether »Solid-State drive« is entered as a media type. If not then run the system review in the Control Panel under "Performance information and tools".

7 Disable Search

Open the Run menu with [Windows]+[R]. Type "services.msc" and confirm with "OK". Double-click on the entry and change the start type to "Disabled". The service will no longer start after confirming.
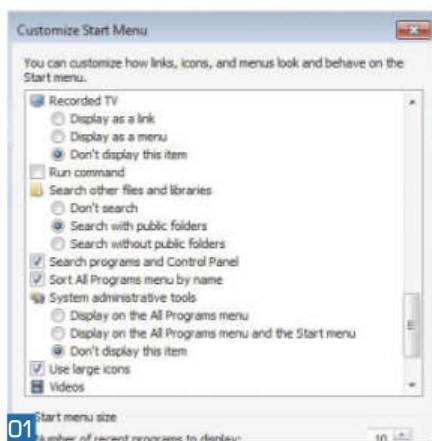

5

8 Disable Timestamp and DOS Name

Open Command Prompt. Type the command "fsutil behavior set disablelastaccess 1" and confirm with [Enter]. Subsequently type "fsutil behavior set disable8dot3 1" and again confirm with [Enter]. With this, you have disabled two more SSD brakes. ◨

6

Tips & Tricks

SEPTEMBER 2015

into OneDrive for it. For this, copy the link and send it to the survey participant. Subsequently confirm your survey with "Done".

WINDOWS

03 **WINDOWS 8**
Assigning new names to the tiles in the Start menu

The usual method of a right-click and 'Rename" does not work for the tiles. Nevertheless, you can assign other names to them in a different manner: Open the tile interface where you press the [Windows] key. Navigate to the tile which you wish to rename. Right-click on it and select "Remove from Start". Now click under the arrow to go to the apps overview. Select the program whose tile you have deleted earlier. Right-click on it and choose "Open Storage Location".

Right-click in the Windows Explorer on the link to the program and rename it. Again right-click on the renamed link and go to "Attach to Start". You will now find the tile of the program with a new name in

01 **WINDOWS 7**
What to do if "Show more results" suddenly goes missing in the search?

Activate the extended results list in the properties of the

If you do not see the link "Show more results" in Windows search then the reason will mostly likely be in the settings of the Start menu. Right-click on a free area on the Taskbar and select "Properties". The window "Properties of Taskbar and Start Menu" will appear. Click on "Customise..." in the "Start Menu" tab here. In the topmost group "Search other files and libraries", select one of the two options "Search with public folders" or "Search without public folders". The important thing here is that the "Do not search" option is not activated. Confirm with "OK" or "Apply". The field "Show more results" will now re-appear as soon as you type something in the Search

field.

02 **WINDOWS**
Set up a survey using OneDrive and send it via Email

Using Microsoft OneDrive, you can quickly and easily publish surveys. In Windows 8.x, start the service via its tile, else log on to the site www.onedrive.live.com with your Microsoft account. Click on "Create" and select the "Excel Survey". Give a name to the survey and a descriptive text. Click on the text field for the first question. A window will open where you can specify questions, the answer type and standard values. Extend your survey by any number of questions via "Add new question". You will get a preview of the survey by clicking on "Save and Display".

Click on "Release Survey" to publish the same. You can then generate an address via "Create Link" so that every participant can send his answers without logging

Before you can rename tiles, you must remove them from the Start menu

You can create and send surveys to your friends with a few clicks in OneDrive

the Start menu.

04 WINDOWS
You can do this if the Recycle Bin disappears from the Desktop
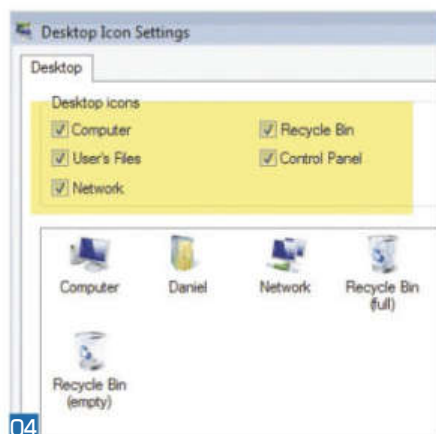
You can hide and display the Recycle Bin icon in the Desktop settings

Under Windows it may happen that the Recycle Bin suddenly disappears. In this case, right-click on the Desktop and select "Customise". Choose "Change Desktop icons" and activate the checkbox before the Recycle Bin icon. Subsequently confirm the process by clicking on "Apply" or "OK".
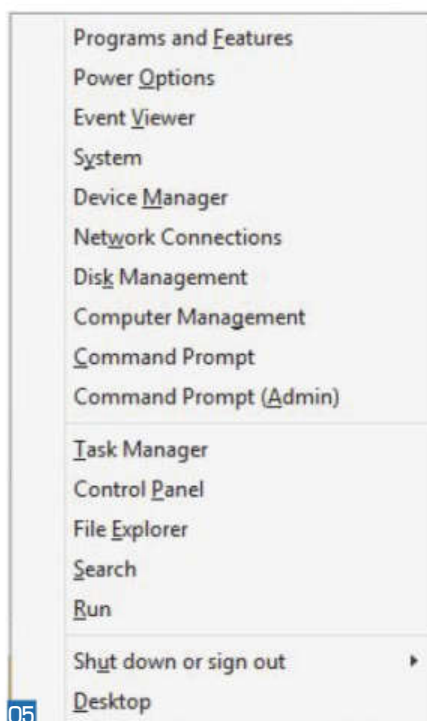
05 WINDOWS 8
Faster access for Powerusers via hidden menu

The Poweruser menu in Windows 8.x provides various functions for advanced users. You can access it by right-clicking in the lower left screen corner or also with the key combination [Windows]+[X]. The menu is divided into three groups. By clicking on "Desktop", you will reduce the windows of all running programs to access the desktop.

In the middle group, you will find the frequently needed functions such as the Task Manager, the Control Panel, the Search function and "Run". The third category will give you access to display and diagnosis tools and the "Disk Administration" under the same. You can get information about your computer via "System".

If you wish to add program links to the Poweruser menu by yourself then open Windows Explorer and navigate to the directory "C:\Users\Username\AppData\Local\Microsoft\Windows\WinX" where you will see the "User name" for the name of


With the help of a hidden menu in Windows 8, you will get quick access to disk management

your Windows account. Here, you will find the folders "Group1" to "Group3".

06 WINDOWS
More disk space by reducing the size for hibernation file

To get more disk space, you can reduce the size of the hibernation file under Windows 7 and 8.x. However, for this you will need Administrator rights. Display the link for the command prompt by typing "cmd" in the Start menu and right-click on the search results. Select "Run as Administrator" and type the command
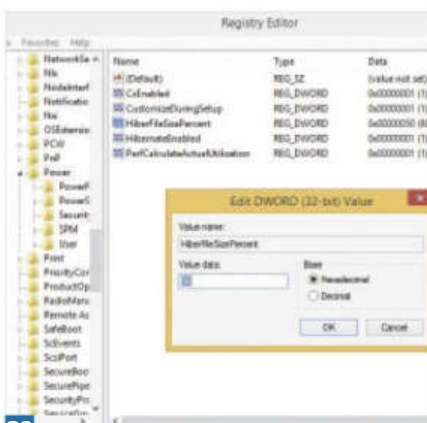
Reducing the hibernation file size in the registry will create additional disk space

"powercfg.exe -h -size 50" without quotes in the window and confirm by pressing the [Enter] key.

You can then reduce the size of the hibernation file in the registry. You will find the key "HiberFileSizePercent" under "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Power". You can assign a percentile value to this key. But be careful! If the value is too less, there is a danger of a blue screen appearing with the message "0xA0: INTERNAL_POWER_ERROR" when the computer wakes up from hibernation the next time.

OFFICE

07 WORD
Create directories for graphics, tables and photos

A list of figures in Word is an integral part of every scientific work and is easy to create. You should never miss out on making such a directory in the document whenever you want to insert tables, photos and graphics in the text or attachments. To help Word compile the directory, you must name every element as follows: Right-click on the element and select "Insert Caption". Under "Name" you can choose between "Figure", "Formula" and "Table" or type a term. Name the element more precisely in the field "Caption", for example: "Figure 1: Different butterflies" and then click on "OK". You can move the image and the image subtitle in the Word document and adjust it exactly to your layout.

If the writing the text is completed and every image is at the right position, you can insert the list of figures. You can position it either under the Table of Contents or in
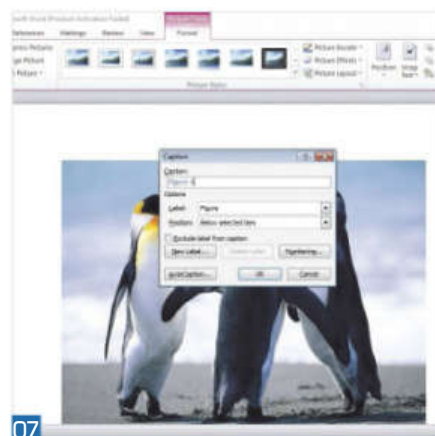
You can add elements to the list of figures via "Caption"

the attachment. For this, click at the place in the document where you wish to insert the directory. Subsequently, go to the menu "References" and click on "Insert List of Figures" in the "Captions" box.

08 EXCEL
Insert a checkbox as a form or control element in the table

A checkbox that you wish to insert in your Excel document, can be used as a form or as a control element. However, you do not have any direct access to the "Checkbox" button in the standard settings of Excel. For this, you have to first enable the tab "Developer Tools" in the menu: In an Excel worksheet, click on "File" on the top left and then on the lowest entry "Options". A dialog field will open where you have to click on the entry "Customise Menu" on the left side. Set a checkmark in the box "Developer Tools" in the field on the extreme right in order to enable it as a new main tab. Confirm with "OK".

If you now wish to insert a checkbox into a random Excel form, open the tab "Developer tools" and select "Insert" from the context menu. You will now have various tools for selection, grouped according to form and ActiveX control elements. A checkbox for your form can be activated where you have to click on the Checkbox icon under "Form elements". If you use the mouse in your Excel document, the mouse pointer will change into a Plus sign. Place the checkbox by clicking in the upper left corner of a cell. Move the mouse over the cell with a checkbox and you can now open the context menu by right-clicking it. You can, for example, customise

the text of the cell via this menu and also assign a cell via "Format control elements" in which it should be seen whether the checkmark is set in the checkbox or not.

09 NOTEBOOK
What to do when the Touchpad suddenly stops working

A wrong setting or key combination and the Touchpad on your Notebook gets disabled. We will show you how you can start using this piece of hardware again. Look for the Touchpad icon (F5 in Samsung Ultrabooks) in the topmost row of your Notebook keyboard. The icon on the key may also be striked out. Press the key and the Touchpad will be reactivated. Sometimes you may have to keep the [Fn] key pressed.

If this is not successful or such a key is not present on the keyboard then connect a mouse to the USB port. If necessary, you can click on the keyboard of your computer. Open the "Control Panel" and click on the category "Hardware and Sound". Right on top, you will now see the blue link "Mouse" under the category "Devices and Printers". You will find your Touchpad in the "Devices" table under the tab "Device settings". Select the same and press the "Activate" button. Close the window by clicking on "OK".

whether the USB connector is correctly plugged into the PC. If required, remove

it and plug it in again. In case of a wireless mouse, ensure that the USB receiver is correctly plugged in. Note that the recipient and the mouse are not far away from each other.

Take a look at the mouse settings.

For this, go to "Control Panel" and click on "Mouse | Pointer Options" there and remove the checkmark for "Enhance Pointer". Use a mouse pad that does not cause any glare. Black-coloured pads with non-slip surfaces are appropriate.

If the problem still occurs then test another USB port on the PC. The unused socket is possibly defective. Cleaning will also often be helpful. Carefully blow pieces of fluff. If there is a cell phone next to the mouse on the desk, then the cell phone signal may interfere with the wireless connection.

10 SSD
Bring a slowed down SSD back to life

If your SSD disk suddenly becomes slow then you should indeed be puzzled and take some actions. You can check the speed of your SSD with the help of the free tool AS SSD Benchmark (on DVD or
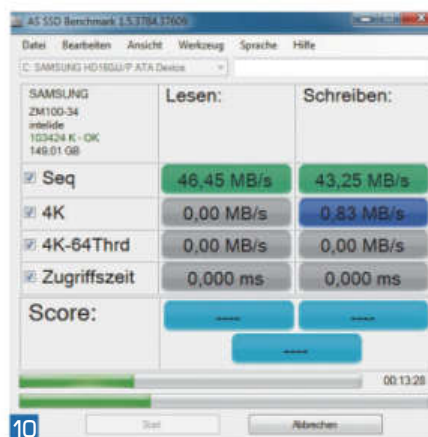
Compare the AS-SSD values with specifications of the manufacturer
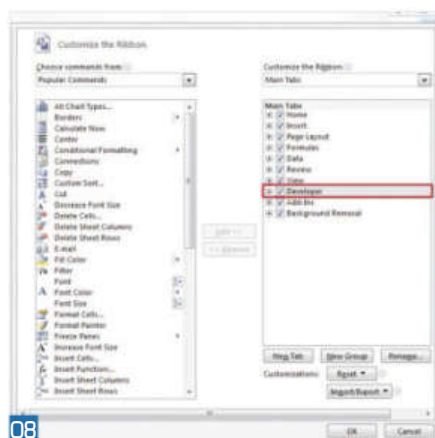
You can insert checkboxes in Excel after you have enabled the developer tools

The Touchpad can be switched on and off on many laptops using the function key in the topmost row

chip.de). During the test, close all other programs and do not work on Windows. The test may last for several minutes. If the test results are not much different than the manufacturer specifications, then everything is OK.

If you transfer the data from your SSD to another disk then the transfer is mostly slower than it would be for the SSD. The transfer will be as fast as the slower device permits it to be.

In case of a conventional hard disk, specific files are being continuously sorted by Windows so that they can be found faster during the starting processing. An SSD is only thwarted by these functions. Using the Tuning tools you can disable the functions "Prefetch" and "Superfetch" responsible for the same, with just a mouse-click.

11 COMPONENTS
Clean a circuit board – why this is useful when done so often

UV rays, heat, humidity and mainly dust attack various components of a circuit board over time. Cleaning them after a few years is not only advisable but also necessary. The easiest way to clean is with warm water and detergent – make sure that there is no foam formation. Let the liquid work and carefully clean the circuit board with a toothbrush and leave the whole thing to dry for at least an entireday.

Likewise, cleaning with Isopropyl alcohol works very well. It is available in every pharmacy. Even in this case, simply lay down the circuit board and clean it lightly. However, be careful about the potential fire hazard. Cleaning is more comfortable using
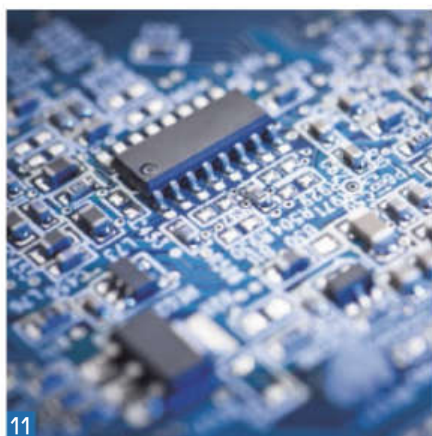
a cleaning spray.

12 DISK
Open an old hard disk for craft projects without much efforts

You can reuse old hard disks for many craft projects. But you must open the disk for the same. When you unscrew a hard disk, dust from the surrounding air will enter in the "clean space" of the hard disk. The device is then no longer usable. Therefore, open only old or defective hard disks.

Like all magnet-based disks, they are well-sealed with so-called Torx-screws. Accordingly, you will need a screwdriver with Torx attachments to open the same. If your hard disk is sealed with rivets, it's not such a good thing: In this case, it is not possible to open the disk without damaging it.

All screws are not always visible. They are often present behind the labels. If you

12

You can open defective hard disks and possibly use them as photo subject

have loosened all screws, you can try to pull out the cover. If this does not work, then either you have overlooked a screw or the cover is additionally sealed with an adhesive. In this case, you can put a thin screwdriver in between the space between the cover and the case and carefully pry the connection all around.

PHOTOGRAPHY

13 SUBJECT
Get the most out of buildings with extraordinary architecture

In architecture photography, you can get excellent photos even from boring buildings. We have compiled the most important tips for the same. Before you get the camera out of the bag, think about what exactly you want to capture. The sunlight, the number of passers-by or even a special event can be crucial at the right time. Also plan for sufficient time to set up your camera. Is it better to photograph an entire building or just the details, is something you need to think about.

You will have to use a tripod mainly at night. Get one with an expensive head as cheap ones often do not have a ball joint and can be moved only in one direction over an axis. In case of a cheap tripod, it can be also be difficult to bring the tripod head exactly in position. In each case, you should get a stable and heavy tripod which is all the more important, the larger your lens is. With increasing focal length, the probability of blurring an image increases in case of cheap tripods.

Likewise, a lens with a large aperture is necessary for night photos and you will

11

Dirty circuit boards can be cleaned thoroughly with water, alcohol or a special spray
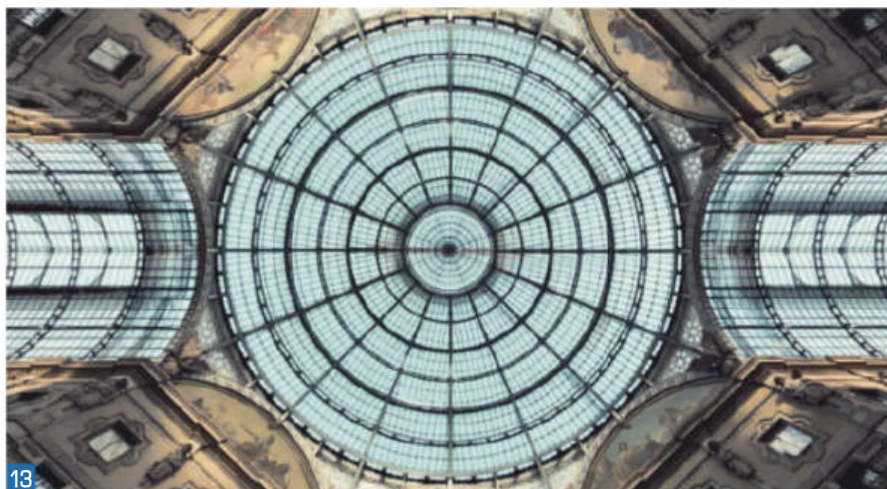
13

Do not capture architecture casually. Surprise the viewers with unusual angles or specific blurs

have appropriate optics for the same. For special photos such as the model train effect Tilt-Shift, you will need a special lens. This shifts the focus level directly when taking a photo. Alternatively, you can also edit the photos later on the computer to achieve this precise effect.

Generally, wide-angle lenses are good for architecture photos - even the simplest of the huts can become a spectacular design with distorted perspectives. You can also get more interesting details of buildings using Telephoto lenses for your audience.

14 COLOURS
Make photos more dramatic with Black/White

Black/White photos often appear more dramatic and artistic than usual colour photos. We will give you a few tips so that you can get particularly beautiful photos from your next shooting session. Images live on contrasts. Even before the eye detects colours, it perceives the contrasts and these come out especially well in Black/White photos. Try to get as many contrasts in Black/White photos as you can. For this, shoot photos in the Black/White mode of your camera and then check how the contrasts take effect.

Clear lines and geometrical shapes are particularly well-suited for Black/White photos. Look for buildings, streets or bridges which you can place beautifully in a scene. Even certain textures are good for a Black/White photo – for example, the speckle pattern of a big cat or the bark of a tree.
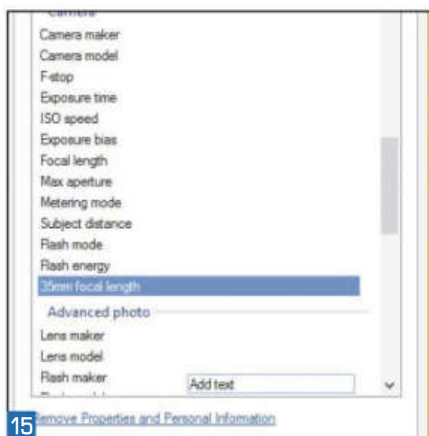
In case of Black/White photos, the

image noise pierces the eye much stronger than colour photos. Set the ISO value of your camera as low as possible and if required, increase the exposure time instead. For this, you will have to use a tripod.

15 METATAGS
Remove EXIF Metadata from camera and smartphone photos

Many photos, particularly if they have been taken using the cell phone, contain metadata. You should delete these sensitive files before you upload the photos on the Internet as they may contain information such as GPS data. For this, open the properties of the photo in Windows by right-clicking on the photo. Go to the tab "Details" and click below on "Delete properties and personal information".

If you wish to simultaneously edit several photos, then install and start the free Exif Tag Remover (Download from chip. de). Click on "Add" and go to the photos which you wish to clean up. Open the photos by double-clicking on them. In the next step, you can decide whether you wish to overwrite the original photos or select a folder to store the cleaned copies, or save the original photo with the addition "cleaned" in the name. Select which metadata should be deleted. Set the check mark for "All supported" and all metadata will be deleted. Win 8 users can also use the free exif eraser.

If you have an iPhone, then you can edit the metadata of your photos using the iOS app EXIF-fi. Currently, this program costs 99 cents in the App Store.

16 GIMP
Partially colour Black/White photos using layer technology

You can use a layer mask to re-colour some areas in order to highlight specific objects

You can partially colour Black/White photos in Gimp (on DVD). Thus, you can highlight specific objects in the photo. Open a colour photo in Gimp and go to "Layer| Duplicate layer". Now, under "Colours", select the option "Desaturate" and confirm with "OK". Subsequently right-click on the black/white layer and select "Add layer mask". Choose "White (full opacity)". In the layers window, click on the small white rectangle next to the copied layer. Now select "Black" as the primary colour and activate the brush. Thus, you will paint over those points which should appear in colour. Zoom using the key [+] to precisely edit the edges of the object.

17 PAINT.NET
Create an illuminated frame around a font

You can quickly and easily create a frame around a font in Paint.NET (on DVD). Create a new image and write your text in it. Now duplicate this layer in the layers window. Remove the check mark of the newly created layer. You will thus see only the second original layer. Select this original layer again. Change the colour of the font with the Bucket tool in the toolbox. You can now make the first layer visible again.

However, select the second layer and then go to "Blur" under "Effects" in the menu bar. Select the "Gaussian Blur" and increase the radius till you are satisfied with the frame. Save the changes by clicking on "OK".

Textures like the speckle patter of a big cat is perfect for Black/White photos

You can delete the meta info from your photos via the blue link at the bottom of the screen

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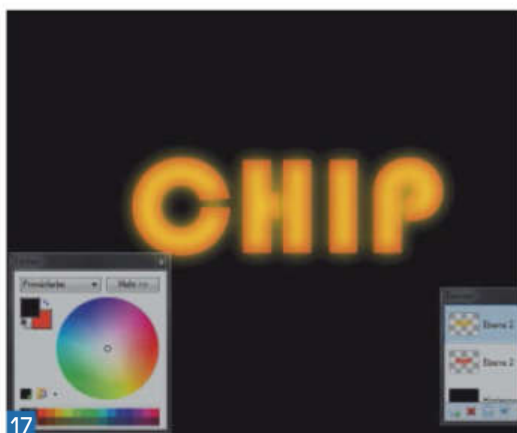
Using a helping layer, you can add an illuminated frame to the font

MOBILE

18 ANDROID
Eliminate problems with slow downloads from the Play Store

Slow downloads in Google Play Store can quickly lead to frustration. You should always download huge files over a fast WLAN connection. The next step is to check the speed of your Internet connection. This can be done using the free CHIP network test which you will find in the Google Play Store. You can also try to restart the download some time later as the Play Store servers may be overloaded. If everything seems fine with your Internet connection and downloads from the Play Store are slow over a longer period of time, then delete the cache and the data of the Play Store app: Open the "Settings" on your smartphone or tablet. Go to the area where all the existing apps are listed. This can be named differently depending on the device, for example "Apps" "Application manager" or "Applications". Look for the menu item "Google Play Store" and tap

You can check the speed of your Internet connection using the CHIP network test

on it. Select the options "Delete cache" and "Delete data". Now start downloads again.

19 IOS
Select your own music for the alarm app integrated in iPhone

If you are using the alarm on your iPhone, then you can also wake up to your own music. And you might just be in a better mood in the morning. Unlock your iPhone and search for the app with the name "Clock". Go below to the category "Alarm" and tap on the Plus sign on the top right. Select the desired time and then tap on the option "Sound". You will now find the option "Pick a song" under the category "Songs". Decide on your favourite song where you can specify the search more precisely via "Interpret", "Title" and "Albums". Subsequently create your new alarm sound by clicking on the button "Save".

SOCIAL NETWORKS

20 TWITTER
Plan tweets beforehand and publish them automatically

You can plan your tweets if you are not able to spend more time on the social network site Twitter. Log in to the free service Twuffer.com using your Twitter account. On the dashboard you will see how many tweets are planned and how many have already been sent. Add your tweets in the upper field and set the date and time. You can randomly plan several tweets. Planned tweets can also be
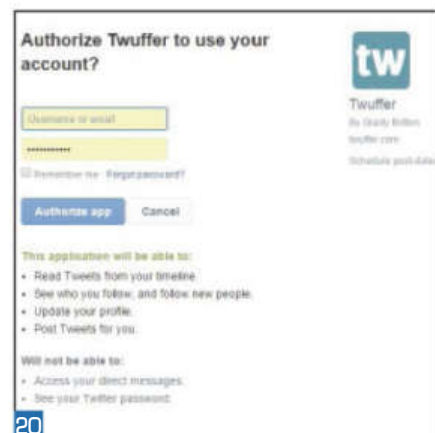
Replace the existing sticker packets with new ones in the shopping cart

changed later.

On Hootsuite.com, you can also plan your tweets on Twitter using Hootsuite.com. But you can plan only maximum one tweet in the free version. Apart from twitter, you can also plan posts for other social networks like Google+ or Facebook using Hootsuite. The Pro-version costs 7.99 Euro per month and gives you more access to multiple advance planning. Hootsuite is recommended if you want to share a post of multiple social networks at a certain time. The application is also available as a free Android app.

21 YOUTUBE
Find and use music to integrate into your own videos

If you love making videos but cannot find any suitable background music for them, you can download a handful of songs from YouTube. The feature is not all that easy to find but works perfectly: Log on to YouTube with your account. In the left side menu, select "Create | Audio Library". In the right half of the screen sort the songs offered according to genre, instrument or mood and search the library according to your own search criteria. You can also listen to the songs before downloading. To download the songs, click on the download arrow on the extreme right at the end of the line of the respective song. The music will be saved as an MP3 file on your hard disk and it can be later used as background music for a video without hesitation. You can also mark your favourites using the Star icon so that you find your songs faster in future.

Representatives from various PC manufacturers with their respective products, showing that they too are Windows 10 ready

Bruce Howe, Head of the Consumer Channel Group, Microsoft Malaysia showing off brand new features of Microsoft's new Windows 10 operating system

Alex Chew, Country Manager of Panasonic Toughbook testing the Toughpad FZ-X1 by dropping it at a height

The ToughPad FZ-X1 is also waterproof, evident by Alex dunking it into a container of water

Lineup of Acer's laptops and notebooks that are ready for Microsoft's new Windows 10 operating system

Nideks showing off the two ASUS ZenPad C7.0 and ZenPad 7.0 devices at a launch event

Sony's brand new cameras work perfectly with its array of Carl Zeiss lenses

The Lenovo Vibe Shot smartphone is the perfect phone for photography and selfie junkies

Models at the launch of Sony's new A7R MkII, RX10 II and RX100 MkIV cameras

Microsoft Malaysia also invited representatives from various NGOs to showcase how they use Microsoft products to better the lives of others

A New Start with Windows 10

Windows 10 is here, and in this upgrade guide, we'll be showing you the the steps that you should take to prepare your PC for it, and give you an overview of the new operating system's most important innovations.

IFA
CONSUMER ELECTRONICS UNLIMITED
BERLIN, 4–9 SEP 2015

The global innovations show.

IFA 2015

We take a look at some of the announcements that will be made at the German international trade show IFA. Expect smartphones, tablets, notebooks, wearables and other various electronic knick-knacks galore.

Making Old Hardware Look New

Dull interfaces, scratched display and software problems are commonplace when it comes to dated devices. This is commonplace even now, as devices that came out just a few months ago can be considered obsolete by its manufacturers. In our guide, we will show you how you can get your hardware to stay visibly and functionally new for an extended period of time.

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YOGA

A NEW WAY TO READ

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LENOVO YOGA TABLET 2

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